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RISK-ADJUSTED HOSPITAL NORMS

HKS PUBLICATIONS

Risk-Adjusted Hospital Mortality Norms

HKS

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PREFACE

One of several divisions of TSM Computing Group, the newly established Healthcare Knowledge Systems (HKS) markets a line of high quality, information-oriented products and services to the healthcare industry and related fields. HKS is the official marketer and distributor of products derived from the clinical research and classification development of the Commission on Professional and Hospital Activities (CPHA).

Normative Publications, a unit of HKS, is committed to a tradition of providing data reference tools, setting performance guidelines and comparative standards for the healthcare industry. Now in its third year of publication, the Risk-Adjusted Hospital Mortality Norms (RAHMN) publication has been published annually since 1987, and is the first volume in the Quality of Care series.

The publications staff who created the 1988 Risk-Adjusted Hospital Mortality Norms are strongly committed to improving the applications of quality measures in general and in providing support and advice to users. Readers with questions about this publication should contact 1-800-521-6210, Extension 3356.

Other publications provided by HKS, Normative Publications are:

Quality of Care Series:

Risk-Adjusted Hospital Readmission Norms

Cost Containment Series:

Length of Stay by Diagnosis and Operation
Length of Stay by DRG and Payment Source
Length of Stay by Psychiatric Diagnosis
(Available for the United States, Northeastern, North Central, Southern and Western regions)

Pediatric Length of Stay by Diagnosis and Operation, United States
Geriatric Length of Stay by Diagnosis and Operation, United States

Users with questions about the Cost Containment Series should contact 1-800-521-6210, Extension 3534.

TABLE OF CONTENTS

Introduction

About the 1988 Risk-Adjusted Hospital Mortality Norms 1

Mortality Data as Quality Measurement Tool 2

The Database

About the Professional Activities Study (PAS) Database 3

About the National Patient Sample File 6

Data Quality 8

The Risk-Adjustment Methodology

The Concept of Risk-Adjustment 11

Technical and Conceptual Models 14

HCFA Mortality Release 15

Uses and Applications for RAHMN

Format 17

Instructions for Calculating Actual Risk-Adjusted Mortality Rates 18

Suggested Summarization Techniques and Reporting Methods 22

DRG Clusters by Physician Specialty 28

Appendices 219

INTRODUCTION

About the 1988 Risk-Adjusted Hospital Mortality Norms

The 1988 Risk-Adjusted Hospital Mortality Norms (RAHMN) publication is designed for use by the following members of the healthcare team:

- Quality assurance coordinators
- Physicians

In addition, these norms can be used by professionals whose roles include monitoring healthcare issues, specifically quality of care:

- PRO, HMO, and PPO quality assurance specialists
- Corporate benefit and insurance company analysts
- Healthcare policy experts

Users are instructed to calculate and compare institution- or provider-specific death rates to the national and/or regional predicted mortality norms constructed from a large nationally representative inpatient database, and refined through a risk-adjusted mortality rate methodology, called the Risk-Adjusted Mortality Index. Comparisons allow users to identify potential problem areas, initiate further inquiries, or define the importance of mortality as an indicator for their own quality assurance programs.

1988 Enhancements

The 1988 edition of RAHMN provides even greater predictive power as a quality assurance tool due to our use of a larger database. Essentially 1987 and 1988 data have been combined and used as the source for the 1988 Risk-Adjusted Hospital Mortality Norms.

Users may notice higher error rates in the 1988 edition when compared to past editions. This is due to a change in the methodology for calculating error rates. The new calculation has been strengthened and is based on actual patient counts per cell rather than the projected estimate of patients represented by a mortality norm cell. For a more detailed discussion of error rates refer to page 13.

Additionally, the 1988 Risk-Adjusted Hospital Mortality Norms are organized by physician specialty to facilitate the comparison of actual death rates to risk-adjusted norms, and the reporting of statistical outliers to the appropriate medical staff. Users should read the section titled "Uses and Applications" for specific instructions and suggestions for summarizing and reporting results.

The 1988 Risk-Adjusted Hospital Mortality Norms constitutes only one component or information source for a comprehensive quality assurance program. The book does not attempt to push an agenda or set standards for death rates for a region or the nation. This publication has been created to help healthcare professionals more uniformly and reliably define quality of care issues through the application of mortality data, an already recognized and accessible quality measure.

Mortality Data as a Quality Measurement Tool

During the last few decades, health services researchers have used mortality data as an indicator of quality of medical care. Several arguments have been advanced to support such use:

- Mortality as a data variable is one of the few quality measures that is valid, since death is perceived by many as the worst possible health outcome and prevention of death has been the major task of medical care.
- Mortality data are easily available, and unlike other potential quality measures, standardized and uniform.
- Mortality data can be collected and displayed by institution, medical specialty, or physician, enabling healthcare professionals to identify potential quality problems.
- Mortality data are accessible to healthcare consumers to evaluate care options on the criterion of quality.

At the same time, health services researchers have been very cautious in endorsing mortality data as a comprehensive tool of quality measurement. Concerns center around four issues:

1. Uneven quality of mortality data and dependence on small, nonrepresentative samples.
2. Use of inappropriate and untested mortality rate adjustment models.
3. Nonspecificity of mortality data.
4. Need to develop and integrate quality measures, in addition to mortality, to increase the efficacy of quality assurance programs.

The approach, methodology, and practical exercises available in the 1988 Risk-Adjusted Hospital Mortality Norms publication overcome these concerns where possible. These issues are further defined throughout the explanatory notes and integrated into a discussion of the:

- Collection, quality, and design of the database from which the mortality norms are constructed.
- Components and definitions of the CPHA risk-adjusted mortality rate model.
- Applications and limitations of the risk-adjusted mortality norms.
- Instructions, uses and applications of the 1988 Risk-Adjusted Hospital Mortality Norms.

DESCRIPTION OF THE DATABASE

Data Collection

The data are compiled from individual patient discharge records submitted by hospitals participating in the Professional Activity Study (PAS).

PAS data storage and retrieval are accomplished as follows:

1. In each participating hospital, personnel transfer demographic and clinical data from the medical record of each discharged patient via microcomputer disk, magnetic tape, or paper abstract.

2. The disk, tape, or abstract is mailed to the data input center in Ann Arbor, Michigan where the data are entered into the computer system.

3. Data then undergo manual or interactive edits and flagged errors are corrected.

4. Hospitals continually add data to be stored in the computer system's permanent history file dating back as far as 1955. Participating hospitals are provided access to their own data through interactive systems, in-house computers, and paper reports. The stored aggregate data are available for policy and contract research and through publications such as the 1988 Risk-Adjusted Hospital Mortality Norms.

Sample Design Used to Calculate Mortality Norms

The PAS database includes approximately 1,050 U.S. short-term general, nonfederal hospitals and discharge records for approximately 9.0 million patients per year. This represents about 24 percent of the annual discharges from the universe of short-term general, nonfederal hospitals in the United States.

To produce the 1988 Risk-Adjusted Hospital Mortality Norms, a nationally representative sample of 1987 and 1988 patient discharges is drawn from the PAS database. The sample patients are then projected to represent all patients discharged from the universe of similar hospitals.

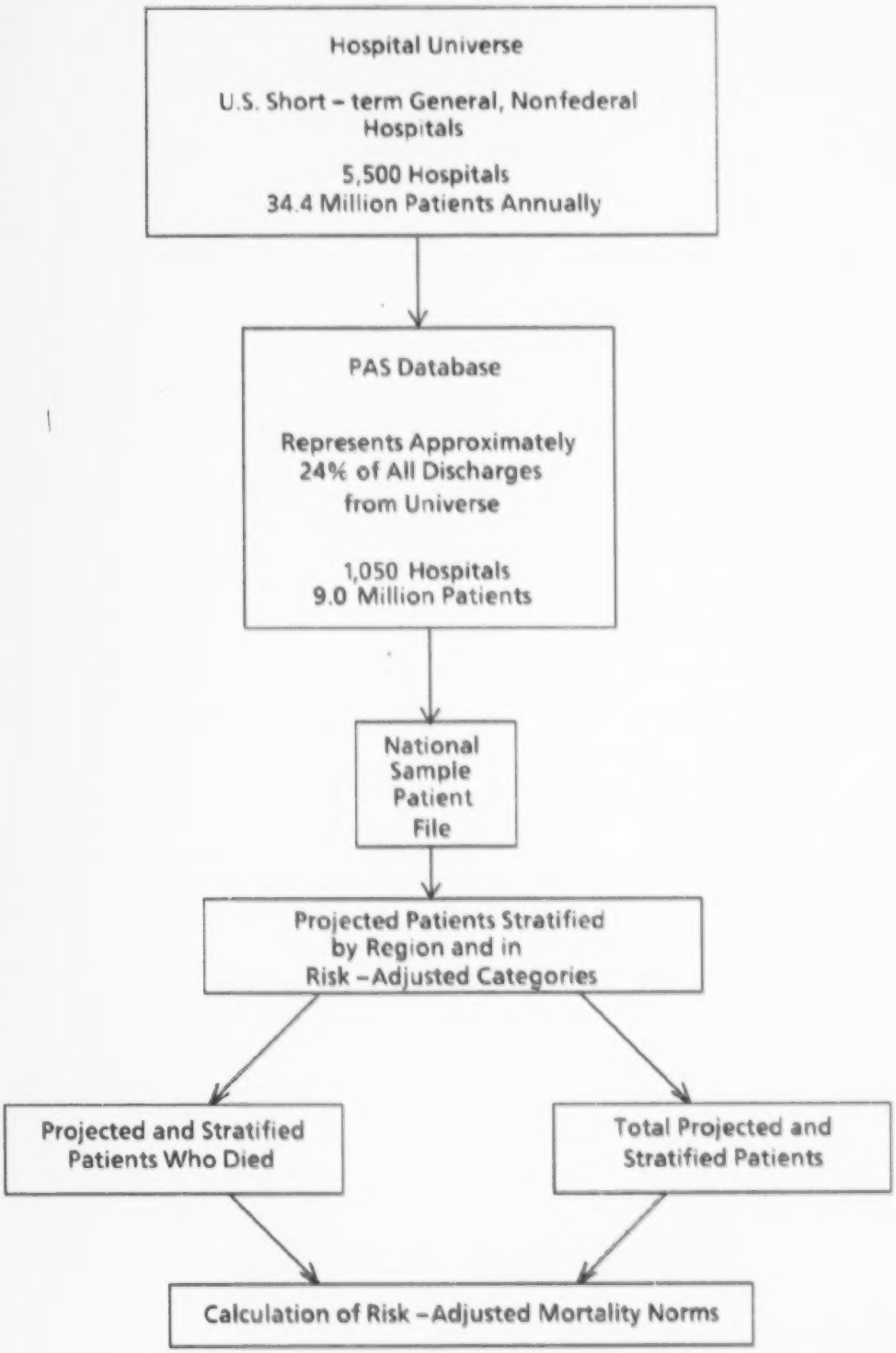
These projections are, in turn, stratified by region and risk-adjustment factors (DRG cluster, complications and comorbidities, age group) and expiration status. Then predicted death rates, i.e., norms, are calculated along with a range of error for each norm.

The diagram on the next page illustrates the sampling and stratification process.

Hospital Universe

The hospital/discharge universe is based on the facility and discharge numbers collected for the most current Annual Survey of Hospitals of the American Hospital Association (AHA). The two charts on page 5 present the number of hospitals and discharges for U.S. short-term general, nonfederal hospitals by census region, ownership, and bedsize.

CREATION OF THE 1988 RISK-ADJUSTED HOSPITAL MORTALITY NORMS


Hospital Universe
U.S. Short – term General, Nonfederal Hospitals
5,500 Hospitals
34.4 Million Patients Annually
PAS Database
Represents Approximately 24% of All Discharges from Universe
1,050 Hospitals
9.0 Million Patients
National Sample Patient File
Projected Patients Stratified by Region and in Risk – Adjusted Categories
Projected and Stratified Patients Who Died
Total Projected and Stratified Patients
Calculation of Risk – Adjusted Mortality Norms

UNITED STATES SHORT-TERM, GENERAL, NONFEDERAL HOSPITALS BY CENSUS REGION, OWNERSHIP AND BEDSIZE

CENSUS REGION	HOSPITAL OWNERSHIP																				TOTAL
	Gov., Nonfed., In Large Cities					Gov., Nonfed., Not In Large Cities					Nongov., Not-for Profit					Nongov., For-Profit					
	BEDSIZE					BEDSIZE					BEDSIZE					BEDSIZE					
	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	
NORTHEAST	--	--	2	5	8	18	9	5	2	2	170	169	255	48	63	8	7	9	--	--	780
N. CENTRAL	1	--	4	2	6	379	47	18	3	2	525	182	281	51	71	21	10	9	1	1	1,594
SOUTH	2	3	4	1	9	499	99	53	12	22	312	186	206	51	63	263	190	85	12	2	2,074
WEST	1	1	8	2	3	221	28	22	4	1	226	128	139	16	19	88	84	24	--	1	1,016
U.S. TOTAL	4	4	18	10	26	1,117	183	98	21	27	1,233	665	881	166	216	380	291	127	13	4	5,464

Source: The 1987 American Hospital Association Annual Survey of Hospitals

DISCHARGES FROM UNITED STATES SHORT-TERM, GENERAL, NONFEDERAL HOSPITALS BY CENSUS REGION, OWNERSHIP AND BEDSIZE

CENSUS REGION	HOSPITAL OWNERSHIP																				TOTAL
	Gov., Nonfed., In Large Cities					Gov., Nonfed., Not In Large Cities					Nongov., Not-for Profit					Nongov., For-Profit					
	BEDSIZE					BEDSIZE					BEDSIZE					BEDSIZE					
	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	
NORTHEAST	--	--	28,396	86,890	221,054	41,413	42,200	43,378	34,979	40,952	372,522	953,187	2,834,882	866,914	1,721,208	19,933	31,915	82,708	--	--	7,422,511
N. CENTRAL	2,221	--	47,397	40,168	160,685	466,234	210,585	181,687	55,871	50,007	801,740	964,693	2,794,373	877,363	1,884,887	34,730	35,916	64,539	9,804	33,138	8,716,038
SOUTH	3,424	23,353	76,600	26,453	373,671	747,266	575,645	613,930	230,897	571,099	588,109	1,027,959	2,425,574	955,244	1,732,436	450,829	851,467	732,493	169,454	37,557	12,213,460
WEST	5,506	6,026	140,944	43,356	136,486	260,495	197,683	319,597	64,271	32,398	437,229	826,790	1,834,887	340,179	531,887	213,395	414,039	217,351	--	21,791	6,044,310
U.S. TOTAL	11,151	29,379	293,337	196,867	891,896	1,515,408	1,026,113	1,158,592	386,018	694,456	2,199,600	3,772,629	9,889,696	3,039,700	5,870,418	718,887	1,333,337	1,097,091	179,258	92,486	34,396,319

Source: The 1987 American Hospital Association Annual Survey of Hospitals

National Sample Patient File Characteristics

The national sample patient file is drawn quarterly in increments of approximately 500,000 discharge records. Each quarter's sample is extracted using all hospitals submitting three complete months of data for that quarter. For any given quarter, this includes approximately 500 hospitals. Hospitals included do not comprise a cohort. These hospitals are distributed across all geographic regions, bedsize categories, levels of teaching status, and types of control. (These categories are defined in the following section.)

Sample Methodology and Reliability

To make the national sample patient file reflect the activity of the U.S. short-term general, nonfederal hospital universe, three techniques are used.

Step 1 - Stratification

First, hospitals are stratified by factors known to affect inpatient statistics. Four stratification factors are used: bedsize, ownership, teaching status, and census division.

1. **Bedsize** represents the number of beds set up and staffed for use in the hospital. The size categories are:

   6-99
   100-199
   200-399
   400-499
   500+

2. **Ownership** describes the type of organization responsible for establishing the overall operation policies of a hospital. There are four major categories:

   Government, Nonfederal, In Large Cities includes county, state, and city hospitals in any of the 50 largest U.S. cities indicated in the most recent AHA Annual Survey of Hospitals.

   Government, Nonfederal, Not in Large Cities includes all county, state, and city hospitals not in the above category.

   Nongovernment, Not-for-Profit includes church-operated and all other not-for-profit, nongovernment hospitals.

   Nongovernment, For Profit includes all investor-owned hospitals.

3. **Teaching Status** is determined by a weighted index measuring program intensity created by Phillip and Hai.[1] The index is based on programs, memberships, and affiliations approved by various bodies. The approvals incorporated in the index are:

   - Accreditation by the Joint Commission on Accreditation of Healthcare Organizations
   - Cancer Program approved by the American College of Surgeons
   - Residency approved by the American Medical Association
   - Medical School Affiliation reported by the American Medical Association
   - Hospital-controlled professional nursing school reported by the National League for Nursing
   - Member of the Council of Teaching Hospitals of the Association of American Medical Colleges

[1] P. Joseph Phillip and Abdul Hai, *An Index of Programs for Hospitals* (Chicago: American Hospital Association, 1976).

Based on this index, hospitals are classified by one of three teaching status groups:

Nonteaching Institution
Minor Teaching Institution
Major Teaching Institution

The statistical formula used to determine teaching status is in Appendix 1.

4. **Census Division** places the 50 states and the District of Columbia into nine geographical areas defined by the U.S. Department of Commerce, Bureau of the Census. These nine divisions and their corresponding regions are:

Region	Division
Northeast	New England
	Middle Atlantic
North Central	East North Central
	West North Central
South	South Atlantic
	East South Central
	West South Central
West	Mountain
	Pacific

State inclusions are listed in Appendix 2.

Once stratified by these factors, the hospitals are organized into a matrix. The matrix has 540 cells. This number is derived by multiplying the number of stratification groups: 5 (bedsize) x 4 (ownership) x 3 (teaching status) x 9 (census division) = 540. Each matrix cell represents a particular configuration of bedsize, ownership, teaching status, and census division. A table illustration of the matrix is displayed in Appendix 3.

Step 2 - Estimation

Of the 540 cells created by hospital stratification, only about 260 are represented by hospitals in the universe. When each of the sample records is assigned to the appropriate stratification cell, about 140 of the 260 cells are filled. This leaves about 120 cells that must be estimated from the cells containing discharge records.

The estimation process utilizes a missing cell methodology designed by Richard Ament, former Senior Statistician at CPHA. This method requires "borrowing" discharge records from neighboring cells. For cells where sample data are unavailable (target cells), a potential source cell(s) is (are) identified. The source cell(s) is (are) identical to the target cell except for a single permitted shift in one of the stratification variables, or more if needed. Rules governing this borrowing process specify which shifts are permitted in order to locate source cells as similar to the target cell as possible. All qualifying source cells are drawn on to fill a particular target cell after a weight has been assigned to each.

Step 3 - Projection

In the final step, projection factors are applied to make the sample representative of the universe of discharges from U.S. short-term general, nonfederal hospitals.

A projection factor is calculated for every cell. This number is calculated as follows:

$$\text{Projection Factor for Cell X} = \frac{\text{Total discharges from the universe represented by Cell X}}{\text{Sample records assigned to Cell X}}$$

Each projection factor is multiplied by the number of actual records for a particular cell. The resulting numbers represent estimated patient discharges, the sum of which approximates total discharges from the U.S. short-term general, nonfederal hospital universe.

Data Quality

Each patient discharge record is rigorously edited before being stored in the PAS database. In addition, records in the national sample patient file undergo an auditing process to eliminate uncorrected or unusual data. Any of the following conditions cause a patient discharge record to be excluded from the sample file and from the 1988 Risk-Adjusted Hospital Mortality Norms.

1. **Incalculable Stay**

   This includes discharges where the length of stay cannot be determined because the admission or discharge dates are absent from the patient discharge record or are illogical.

2. **Incalculable Age**

   Discharge records where the birth year or admission date is unrecorded or illogical are excluded.

3. **No Principal Diagnosis**

   Any discharge record without a principal diagnosis is excluded.

4. **Disposition Inconsistency**

   Some dispositions, e.g., alive and died, are mutually exclusive. Those patient discharge records where the disposition is inconsistent are excluded.

Additional Exclusions

In addition to the exclusions mentioned above, there are other exclusions performed at the patient level. The following patients are not included in the 1988 Risk-Adjusted Hospital Mortality Norms.

1. Stillborns
2. Newborns
3. Discharges transferred to another short-term hospital
4. Discharges with stays less than one day, discharged alive
5. Discharges with diagnosis-age inconsistency or procedure-age inconsistency
6. Discharges with a principal diagnosis of AIDS

Stillborn discharges are excluded for the obvious reason that all have died. In categories 2, 3, and 4, it is impossible to evaluate the treatment of those patients because hospitalization is abbreviated. In addition, the newborn and patient discharge transfer data are incomplete, and many of the less-than-one-day patient discharges are presumably outpatients. The fifth exclusion eliminates patient records with inconsistent data. Certain diagnoses and procedures are only applicable to patients falling within a particular age range. Those patients whose age falls outside the range implied by a recorded diagnosis or procedure code are excluded. Finally, discharges with a principal diagnosis of AIDS (042-044.9) have been excluded because they are generally in the final stages of the disease, and usually have been admitted to die.

There are several reasons it is necessary to keep in mind the hospital- and patient-level exclusions as well as the method for constructing the predicted mortality norms.

The first involves the charge, sometimes leveled against mortality data, that such data are a nonspecific indicator of quality of medical care. According to this critique, mortality data are poor quality measures because most patients do not die in the hospital, though their treatment may have been negligent or they may have been misdiagnosed. Thus, it is important to clearly understand and acknowledge the limits of mortality data in order to prevent overreliance on numbers, in this case the predicted mortality norms. The appropriate use of such norms requires an appreciation of the overall care patterns in an institution or of a physician.

Second, the 1988 Risk-Adjusted Hospital Mortality Norms have practical applications and will be used as a complement to other data sources used to administer quality assurance programs. Consequently, it is essential to know how to calculate and interpret the norms when comparing them to individual institutions and providers.

Concerns About Mortality Data

Data quality and the reliance on small, nonrepresentative samples are two of the concerns researchers give voice to whenever mortality data are recommended to assess quality of medical care.

First, researchers point out that decisions about quality of medical care, which may reflect on provider performance, depend on knowledge of and accuracy of mortality coding and reporting practices.

Studies sponsored by the Rand Corporation reveal widespread underreporting of hospital mortality for Medicare patients, averaging greater than 6 percent.[2] Moreover, regional variations in lengths of stay among hospitals, differences in patient discharge practices, and unequal access to home care and hospice services in communities, determine the number of reported hospital deaths. These practices, left undocumented, can lead to erroneous and distorted conclusions drawn from inaccurate data about provider performance.

Second, several of the studies pioneering the application of mortality data are based on small patient samples or represent analysis of only a few types of hospital patients.[3] As a consequence, recommendations based on these data may be less reliable if generalized across the hospital patient universe.

IMPORTANT NOTE:

Through the approach favored in this publication, every attempt is made to answer apprehensions about data quality, and small, nonrepresentative samples.

Member hospitals contributing to the database use standardized report formats. Abstractors have ongoing training. Moreover, efforts to minimize errors are met through automated editing and data checks at the time of processing.

Pains have been taken to assure breadth and representativeness through careful statistical sampling of the largest hospital patient discharge database available.

This is not to claim that there are no anomalies caused by diverse reporting practices or that data errors are entirely edited in the sample used to construct the mortality norms. When interpreting the mortality norms for quality assessment, we acknowledge the importance of these issues and have tried to minimize their effect.

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[2] Mark S. Blumberg, *Comments on HCFA Hospital Death Rate Statistical Outliers*, Health Services Research 21:6 (February 1987):715.

[3] See DesHarnais, Susan et al., *Using Data to Evaluate Performance*, Michigan Hospitals 23:10 (October 1987):22, for a listing of recent outcome studies.

THE RISK-ADJUSTMENT METHODOLOGY

The Concept of Risk-Adjustment

The predicted mortality norms in this publication are risk-adjusted, taking into account differences in case mix and complexity. The risk-adjustment factors included for each projected patient discharge are:

- DRG cluster
- Presence or absence of complications and comorbidities (with CCs or without CCs)
- Age group (<65, 65-74, 75+)

DRG Clusters

Diagnosis Related Groups (DRGs) were not designed as patient outcome measures. Some of the factors associated with increased risk of death for particular clinical conditions, e.g., age and comorbidity, are the basis for DRG divisions. This is most obvious for Acute Myocardial Infarction (AMI), DRGs 121, 122, 123. DRG 123 includes only patients who died.

Consequently, the DRGs have been regrouped into clusters to examine how the factors used for DRG divisions, e.g., age and comorbidity, are associated with increased risk of death. This regrouping of patients includes 328 categories. Appendix 4 provides a mapping of DRG clusters to DRGs along with the description of the clinical condition.

The 1988 Risk-Adjusted Hospital Mortality Norms uses the fourth revision DRGs, in effect from October 1, 1987 through September 30, 1988. There are 475 DRGs in the fourth revision.

Presence or Absence of Complications and Comorbidities (CCs)

To determine the presence of complications or comorbidities (CCs), a patient's secondary diagnoses are compared to a list of ICD-9-CM diagnosis codes defined by the Health Care Financing Administration (HCFA) as CCs.

The HCFA definitions are:

- A complication is a condition that arises during the hospital stay that prolongs length of stay by at least one day in approximately 75 percent of the cases.
- A comorbidity is a pre-existing condition that will, because of its presence with a specific diagnosis, cause an increase in length of stay by at least one day in approximately 75 percent of the cases.

The list of CCs is included as Appendix 5. This list corresponds to the fourth revision DRGs.

To ensure ease of use, and consistency with HCFA definitions, complications -- which occur during the patient's stay and may be hospital or physician-caused, e.g., postoperative wound infections -- have not been separated from comorbidities -- which are existing conditions and unrelated to provider performance, e.g., diabetes.

Age Groups

Recognizing age as a risk factor, patients are stratified by the following age groups (in years):

<65
65-74
75+

Geographic Region

As previously described, the national patient sample file is initially stratified by nine census divisions. These nine divisions are collapsed into four regions in the 1988 Risk-Adjusted Hospital Mortality Norms:

Region	Division
1. Northeast	New England Middle Atlantic
2. North Central	East North Central West North Central
3. South	South Atlantic East South Central West South Central
4. West	Mountain Pacific

State inclusions for the four regions are listed in Appendix 2. For each DRG cluster, mortality rates are provided for each region and for the U.S. overall.

Physician Specialty Groups

The predicted mortality rates for each DRG cluster stratified by presence or absence of CCs, age, and geographic region are grouped further by 16 physician specialties. Organization by physician specialty is an addition this year, incorporated in an effort to make it easier for users to compare actual risk-adjusted mortality rates to the norm by area of physician expertise.

See the beginning of the DRG Clusters section (page 25) for a mapping of DRG clusters to Physician Specialty Groups.

Predicted Mortality Norms

The norm represents a risk-adjusted predicted death rate. Each norm is practice-derived or empirically-based. In other words, the evaluation of risk factors is based on existing care patterns as represented by the national patient sample file. The sample includes all payors and patient types and is representative of the universe of U.S. short-term general, nonfederal hospitals.

IMPORTANT NOTE:

> The practice-derived characteristic of the predicted mortality norms is significant. It is not the intention of HKS publication staff to establish a standard recommending what national and regional death rates should be. These predicted mortality norms are descriptive rather than prescriptive.

Error Ranges

Each norm in this book is accompanied by an error rate, the percentage denoted within the parentheses. The error rate serves as a cautionary flag when interpreting the norms. The error rate is contingent upon the number of patients (before projection) represented by a mortality norm cell. If the patient count before projection is 56 or lower it corresponds to an error rate greater than 20 percent, and the norm is not reported in the book.

To give an example, the national predicted mortality norm for Stomach, Esophageal, and Duodenal Procedures (DRG cluster 106) for a patient discharge with CCs, in age group 75+, is 17.7 percent. The error rate is ±2.1 percent. This means the mortality rate for discharges with those attributes will fall between 17.7-2.1 and 17.7+2.1, i.e., 15.6 percent to 19.8 percent. In this illustration, the error range is small, indicating the norm is a fairly accurate measure of the mortality rate for all such discharges.

A second example, however, illustrates the rationale for including error ranges and the need to exercise caution when using them to make inferences about quality of medical care. In a hypothetical example, the predicted mortality norm for DRG cluster X for a patient with CCs, in age group 75+, is 50 percent with an error rate of 40 percent. This means that the mortality rate for such patients will fall between 10 and 90 percent. The wide range signifies that the accuracy of the norm is fairly low. It also indicates that the actual patient count is small. For these reasons, mortality norms with error ranges greater than 20 percent are not recorded.

IMPORTANT NOTE:

> The smaller the error range of a national or regional predicted mortality norm, the more reliable the norm; the higher the error range the less accurate the norm as a measure of the mortality rate for a specific category of patient discharges. In reading the norms, hyphens denote there are no data for the patient discharge category. Asterisks indicate the data are not being reported because the error rate is 20 percent or higher.

Technical Model

To obtain the national and regional predicted mortality norms, the procedure is:

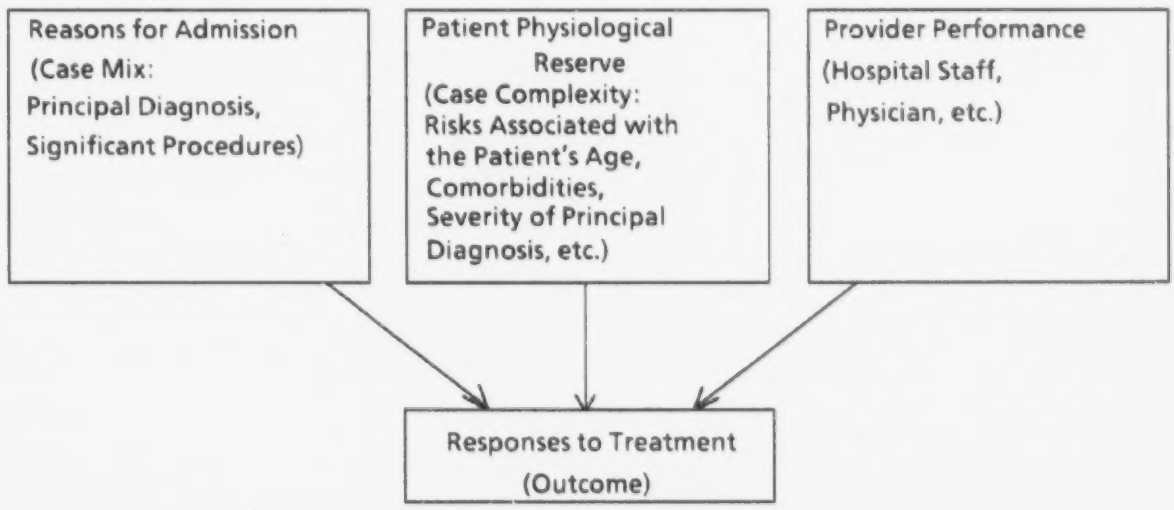
1. The projected patient counts are derived from the national patient sample file.
2. The projected patient discharges are split into their respective:
   - Region
   - DRG cluster
   - CC category
   - Age group
3. The projected number of patient discharges with a disposition of "died" and the projected number of total patient discharges in each stratified group are counted.
4. The projected number of patient discharges with a disposition of "died" in each stratified group is divided by the projected number of total patient discharges in that group.
5. This proportion is multiplied by 100 to obtain the norm, expressed as a percentage.

Conceptual Model

In a paper published in 1987 by CPHA researchers, the authors suggest that patient health outcomes are the result of three factors:

- Case mix: the reasons for hospital admission (principal diagnosis, significant procedures).
- Case complexity: the risks associated with the patient's level of physiological reserve (age, comorbidities, race, sex, family history of disease, health behavior, etc.).
- Provider performance.

This relationship is illustrated as follows:



Accordingly, differences in outcome or provider performance relating to quality can be isolated, once differences in reasons for admission and patient physiological reserve, i.e., case mix and complexity, have been adjusted.[4]

[4]Ibid., pp 21,22.

Critique Of HCFA Methodology

The introduction of this conceptual model underlines the importance of risk-adjustment. In addition, it strengthens the argument favoring mortality indices in which patient-level rather than hospital-level variables are used. This contrasts with the approach initially taken by the Health Care Financing Administration (HCFA) in March, 1986 when it first published provider-specific mortality data based on a hospital-level approach. CPHA's researchers, recognizing early on the problems of the hospital-level approach to mortality data applications, developed the risk-adjusted mortality rate model relying on patient-level data.

The table below provides a brief comparison of the methodology used by HCFA for 1987 data with the methodology used in this workbook (The 1988 HCFA methodology was not available at publication date)

Comparison Point	CPHA Risk-Adjusted Mortality Methodology (1988)	HCFA Risk-Adjusted Mortality Methodology (Release of 1987 data)
Level of analysis	Patients	Patients
Dependent variable	In-hospital deaths	Deaths within 30 days of admission
Choice of risk factors	Based on validated model • Practice-derived • Constructed from discharge data in U.S. short-term general, nonfederal hospitals	Based on unvalidated model • Expert opinion • Experience from mortality analyses of 1985 and 1986 data
Risk factors	• DRG cluster (328) • Presence or absence of complications and comorbidities • Age group	• Broad DRG groupings (Sixteen high or low risk of death categories) • Age • Sex • Complicating diagnoses (Limited number) • Prior hospitalization in 1987 • Transfer status
Scope	All patients	Medicare patients, all others

While HCFA's shift to the patient-level approach with 1986 data was a step in the right direction, researchers have expressed concern over the dependence on inappropriate and untested risk-adjusted mortality rate models as indicators of quality in the current model. Some advisories about the HCFA model cited by CPHA researchers are described below.

Unvalidated Model

The model HCFA is currently using has not been validated. (In 1986 HCFA used a similar model without validating it prior to use.) While HCFA is currently conducting studies, it is still unknown at this writing whether HCFA's model is a valid predictor of mortality. In contrast, the model which resulted in the methodology incorporated into this publication, was tested initially with 1983 data from U.S. short-term general, nonfederal hospitals. The findings were encouraging; the model claims a strong relationship between predicted and actual death rates over all DRG clusters and hospital combinations.[5]

[5]Ibid., p.26.

Inappropriate DRG Groupings

The HCFA-defined high and low risk of death DRG categories are broad and all-encompassing. As a result, they forfeit the potential clinical homogeneity of the DRG classification system. It is well known that death rates associated with different principal diagnoses vary greatly; it is thus necessary to develop as clinically homogeneous groups as possible when modeling factors associated with risk of death.

Misleading Dependent Variable

The HCFA methodology recommends a 30-day survival following the last admission in 1987 as the principal dependent variable for provider performance. The rationale for this specific choice is not clear. While it seems HCFA is attempting to compensate for widespread variations in lengths of stay by providing an equal observation interval, the strategy has several negative effects.

First, it is impossible to determine whether poor hospital care caused the majority of deaths occurring within 30 days of admission, since most deaths occur after discharge.

Second, using the patient's last admission fails to take into account other hospitalizations during the year when the patient survived.

Third, it is infeasible for providers to verify HCFA's claims about out-of-hospital deaths and last admissions, thus making such data less objective.

The CPHA methodology, unlike that of HCFA's, does not assign any credit nor does it discredit any provider by implicitly deciding a provider should be held responsible for a death once a patient has left the hospital.

USES AND APPLICATIONS

If you have used the Risk-Adjusted Hospital Mortality Norms Workbook previously, you will notice the appearance of this edition has changed. The emphasis has shifted away from a "workbook" format that allowed users to perform actual mortality rate calculations on the page. Removing the worksheet half of the page has allowed us to reduce the size of this publication, make it less cumbersome, and hopefully easier to use.

For users who wish to continue calculating actual death rates manually, blank worksheets are provided at the end of this section. An outline for this process follows (page 18).

The other important change relates to the organization of the DRG clusters. The 1988 Risk-Adjusted Hospital Mortality Norms have been organized by 16 physician specialties. This significant change allows the user to more easily compare actual risk-adjusted death rates to the norm by field of physician expertise; identify statistical outliers; and report these outliers to the appropriate medical or administrative staff. Suggestions for summarizing and reporting these outliers by physician specialty can be found at the end of this section (page 22). The sixteen physician specialties are as follows:

1. Neurosurgery
2. Neurology
3. Vascular Surgery
4. General Surgery
5. Internal Medicine
6. Oncology
7. Cardiology
8. Gastroenterology
9. Ophthalmology
10. Ear, Nose, Throat
11. Cardiothoracic Surgery
12. Dentistry
13. Orthopedics
14. Urology
15. OB/Gynecology
16. Psychiatry

Instructions for Calculating Actual Death Rates by Physician Specialty

EXAMPLE

1. Select the desired physician specialty for review ..... Neurosurgery, (physician specialty 1)

2. Determine the patient sample, i.e., the total number of patients treated within the Neurosurgery specialty by:

   Referring to page 25 for a listing of DRG clusters assigned to this specialty ..... DRG clusters: 1-4, 6-7

   Referring to Appendix 4 for a mapping of DRGs to DRG clusters ..... DRG Cluster DRG

   1-------> 1
   2-------> 2
   3-------> 3
   4-------> 4
   6-------> 6
   7-------> 7,8

3. Begin with DRG cluster 1 (Craniotomy Age > 17 Except for Trauma). Stratify and place the DRG cluster patient discharges in their appropriate risk categories. Assume the following discharges occurred ..... WITH CCs:

   <65 yrs - 100
   65-74 yrs - 100
   75+ yrs - 100

   W/O CCs:

   <65 yrs - 100
   65-74 yrs - 100
   75+ yrs - 100

4. Determine the number of patients in each risk category who died. Assume the following deaths occurred for DRG cluster 1 ..... WITH CCs:

   <65 yrs - 10
   65-74 yrs - 15
   75+ yrs - 30

   W/O CCs:

   <65 yrs - 5
   65-74 yrs - 10
   75+ yrs - 15

5. Divide the total number of patients who died by the total number of patient discharges in each risk category and multiply by 100. For example, 10/100=10%. The following death rates would result .....WITH CCs:

<65 yrs - 10%
65-74 yrs - 15%
75+ yrs - 30%

W/O CCs:

<65 yrs - 5%
65-74 yrs - 10%
75+ yrs - 15%

6. Repeat steps 1 through 5 for the remaining DRG cluster(s) within the selected physician specialty.

NOTE: Worksheets are provided at the end of this section to be used for manual calculations of actual mortality rates as needed.

Calculating Error Ranges for the Actual Death Rates

The value of the predicted mortality norms is enhanced when an error range or confidence interval for the actual death rates is figured.

To obtain the error range for an actual death rate, follow this procedure:

1. Obtain the actual death rate, i.e., the percentage of discharges where the patient died, and the total number of discharges in each risk category for the DRG cluster.

   One error range is presented for each risk category for a DRG cluster. Returning to the example used to calculate the actual death rates for DRG cluster 1, the actual death rate is 10 percent and the total number of patients is 100 for patient discharges with CCs, age <65.

2. Go to Appendix 6, the error range tables starting on page 236 in the appendix section.

   The horizontal axis of the table represents the total number of patient discharges starting at 5 up to 1600. The vertical axis of the table represents the actual death rate, starting at 1 percent up to 50 percent.

3. Find the total number of patient discharges on the horizontal axis (or the number closest) and the percentage who died on the vertical axis. Locate the corresponding number.

PATIENT NUMBER

PERCENT DIED	85	90	95	100	105	110	115	120
1%	3.24	3.15	3.06	2 98	2.91	2.85	2.78	2.72
2%	4.56	4.43	4.31	4 20	4.10	4.00	3.92	3.83
3%	5.55	5.39	5.25	5 12	4.99	4.88	4.77	4.67
4%	6.38	6.20	6.03	5 88	5.74	5.61	5.48	5.37
5%	7.09	6.89	6.71	6 54	6.38	6.23	6.10	5.97
6%	7.73	7.51	7.31	7 12	6.95	6.79	6.64	6.50
7%	8.30	8.07	7.85	7 65	7.47	7.30	7.14	6.99
8%	8.83	8.58	8.35	8 14	7.94	7.76	7.59	7.43
	9.31	9.05	8.81		8.38	8.19	8.01	7.84
10%				9.00	8.78	8.58	8.39	8.22
	10.18	9.89	9.63		9.16	8.95	8.75	8.57
12%	10.57	10.28	10.00	9.75	9.51	9.30	9.09	8.90
13%	10.94	10.63	10.35	10.09	9.85	9.62	9.41	9.21
14%	11.29	10.97	10.68	10.41	10.16	9.93	9.71	9.50
15%	11.62	11.29	10.99	10.71	10.45	10.21	9.99	9.78

Comparison and Interpretation of Actual Death Rates to Predicted Mortality Norms

1. Compare the actual death rate and error range in each risk category for the DRG cluster, and determine the difference.

   To continue the illustration using DRG cluster 1, the actual death rate should be compared to the national predicted mortality norm. For patients <65 years of age with CCs, the actual death rate is 10 percent, with an error range of ± 9.0 percent (1.0 percent to 19.0 percent). The national predicted mortality norm is 13.3 percent with an error range of ±2.3 percent (11.0-15.6 percent).

2. To make the comparison more serviceable, consider the actual death rate and predicted mortality norm as ranges themselves when each of their error ranges is factored in for each of the DRG clusters within each physician specialty group.

   Continuing with the Neurosurgery physician specialty example, the outline shown on the following page can be used to summarize findings within each physician specialty group. Summary reports such as these allow users to better monitor variances by physician specialty.

Sample of Summarization and Reporting Format

PHYSICIAN SPECIALTY: Neurosurgery

DRG Cluster: 1
Craniotomy, Age>17 Exc Trauma

EXAMPLE

	Actual- %	(Err Rate)- %	Range - %	Norm- % (Total US)	(Err Rate)- %	Range- %
With CCs						
<65	10.0	±9.00	1.00 --> 19.00	13.3	±2.3	11.0-->15.6
65-74	15.0	±10.71	4.29 --> 25.71	17.3	±3.4	13.9-->20.7
75+	30.0	±13.75	16.25 --> 43.75	20.3	±4.2	16.1-->24.5
W/O CCs						
<65	5.0	±6.54	-1.54 --> 11.54	3.8	±2.4	1.4-->6.2
65-74	10.0	±9.00	1.00 --> 19.00	4.5	±4.5	0.0-->9.0
75+	15.0	±10.71	4.29 --> 25.71	5.7	±6.2	-0.5-->11.9

DRG Cluster: 2
Craniotomy for Trauma, Age >17

	Actual- %	(Err Rate)- %	Range- %	Norm- % (Total US)	(Err Rate)- %	Range- %
With CCs						
<65				17.6	±3.5	14.1-->21.1
65-74				28.7	±9.4	19.3-->38.1
75+				33.3	±7.0	26.3-->40.3
W/O CCs						
<65		USER FILLS IN		9.6	±5.5	4.1-->15.1
65-74				7.4	±14.3	-6.9-->21.7
75+				10.3	±11.8	-1.5-->22.1

DRG Cluster: 3
Craniotomy Age <18

	Actual- %	(Err Rate)- %	Range- %	Norm- % (Total US)	(Err Rate)- %	Range- %
With CCs						
<65				8.8	±3.8	5.0-->12.6
65-74				--	--	--
75+				--	--	--
W/O CCs						
<65		USER FILLS IN		2.0	±3.5	-1.5-->5.5
65-74				--	--	--
75+				--	--	--

Interpreting Mortality Rate Range Comparisons to the Norm

IMPORTANT NOTE:

> In most instances, an institution- or provider-specific actual death rate range, i.e., after the error range has been added and subtracted, will overlap the range figured for a specific predicted mortality norm. This does not allow the user to make inferences about quality of medical care, e.g., that the institution or provider offers "average" quality of care; it simply means the institution or provider is not a statistical outlier. A statistical outlier signifies that an institution's or provider's actual death rate range and the predicted mortality norm range for a specific DRG cluster do not overlap.
>
> Similarly, if the institution's or provider's actual death rate range does not overlap a specific predicted mortality norm range, i.e., it is higher or lower, its outlier status does not necessarily signify the provision of high or low quality medical care. It simply suggests that further investigation into the reasons for outlier status are in order.

In our example, the provider's actual death rate range for DRG cluster 1, Craniotomy, Age >17 except for Trauma, for patient discharges with CCs, in age group <65, is 1.0 to 19.0 percent and overlaps the national predicted mortality norm range of 11.0 to 15.6 percent for the same patient group.

In an instance, where the actual death rate range does not overlap and is higher than the predicted mortality norm range, the user might take these additional steps:

- Question the accuracy of the norm for patient discharges under study by adhering to the rule of thumb: the higher the error range the less reliable the norm.
- Ascertain whether the patient samples upon which the actual death rates are calculated are fairly comparable to the patient discharges on which the norm is based.
- Establish whether the risk factors are appropriate for the patient sample for which the actual death rates are calculated.

If an investigation yields affirmative responses to each category of inquiry outlined above, it may be appropriate, in cases where actual death rate ranges are outliers, to conduct an in-depth quality assessment.

IMPORTANT NOTE:

> When interpreting the predicted mortality norms in this book, outlier status--when the actual death rate ranges do not overlap with the predicted mortality norm ranges--does not confer a poor quality of care label on those institutions or providers with higher actual mortality rates, or "center of excellence" designation on those with lower actual mortality rates. Outlier status simply means further investigation may be appropriate.

The 1988 Risk-Adjusted Hospital Mortality Norms are most valuable when used in conjunction with information about:

- Limitations about mortality data applications.
- Special characteristics of the patient sample of the institution or provider under study.
- Other risk-adjusted mortality rate methodologies for comparative purposes.
- Other quality measures to complement mortality data, e.g., postsurgical complications and readmission rates, integrated into a comprehensive quality assurance program.

WORKSHEETS
CALCULATE YOUR OWN
RISK-ADJUSTED DEATH RATE

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No. of Patients Who Died / Total No. Patient		÷	÷	÷	÷	÷
	=	=	=	=	=	=
% Patiens Who Died						

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No of Patients Who Died / Total No. Patients	÷	÷	÷	÷	÷	÷
	=	=	=	=	=	=
% Patients Who Died						

WORKSHEETS
CALCULATE YOUR OWN
RISK-ADJUSTED DEATH RATE

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No. of Patients Who Died / Total No. Patient		÷	÷	÷	÷	÷
	=	=	=	=	=	=
% Patiens Who Died						

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No of Patients Who Died / Total No. Patients	÷	÷	÷	÷	÷	÷
	=	=	=	=	=	=
% Patients Who Died						

WORKSHEETS
CALCULATE YOUR OWN
RISK-ADJUSTED DEATH RATE

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No. of Patients Who Died		÷	÷	÷	÷	÷
Total No. Patient						
	=	=	=	=	=	=
% Patiens Who Died						

Provider Specialty _____

DRG Cluster _____

	With CCs Age			Without CCs Age		
	<65	65-74	75+	<65	65-74	75+
No of Patients Who Died	÷	÷	÷	÷	÷	÷
Total No. Patients						
	=	=	=	=	=	=
% Patients Who Died						

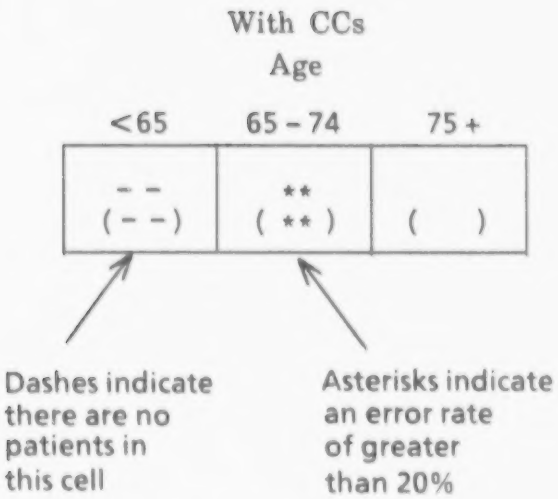
DRG CLUSTERS BY PHYSICIAN SPECIALTY

Physician Specialty Groups		DRG Clusters
1.	Neurosurgery	1-4, 6-7
2.	Neurology	8, 10-11, 16-17, 21-24
3.	Vascular Surgery	5, 76-77, 84-85
4.	General Surgery	78-79, 102-112, 114, 125-132, 143, 172-180, 188-195, 221, 264-265, 269-270, 273-274, 280, 287, 302-305, 312-316, 326
5.	Internal Medicine	12-15, 18-20, 56-57, 60-68, 133, 135-137, 181-182, 184-187, 196-199, 208-209, 225-226, 228, 266-268, 281-286, 306-310, 317-320, 327-328
6.	Oncology	9, 46, 58, 115, 134, 183, 210, 224, 240, 271-272, 275-279
7.	Cardiology	86-101
8.	Gastroenterology	116-121, 124
9.	Ophthalmology	25-34
10.	Ear, Nose, Throat	35-45, 47-53
11.	Cardiothoracic Surgery	54-55, 59, 69-75, 80-83
12.	Dentistry	113, 122-123
13.	Orthopedics	138-142, 144-171, 325
14.	Urology	200-207, 211-220, 222-223, 227
15.	OB/Gyn	229-239, 241-256
16.	Psychiatry	288-297, 299-300

NOTE: If you are looking for a particular DRG, please refer first to Appendix 4 for a mapping of DRGS to DRG clusters.

IMPORTANT NOTE:

The physician specialty groups have been created based on the most common areas of medical specialty and can be used as a guideline for reporting purposes. We acknowledge the suggested groupings of DRG clusters into physician specialties may not meet the needs of all users. You may wish to organize the clusters, make normative comparisons, and report variances in an entirely different manner. If so, the looseleaf approach allows for flexibility since pages can be removed and reorganized to better meet individual need.


With CCs
Age
<65
65 – 74
75 +
– –
(– –)
**
(**)
( )
Dashes indicate there are no patients in this cell
Asterisks indicate an error rate of greater than 20%

NEUROSURGERY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 1
CRANIOTOMY, AGE > 17 EXCEPT FOR TRAUMA
DRG(S): 1

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	13.3 (2.3)	17.3 (3.4)	20.3 (4.2)	3.8 (2.4)	4.5 (4.5)	5.7 (6.2)
Northeast	15.8 (5.0)	21.8 (7.1)	19.0 (8.8)	3.4 (5.3)	4.6 (9.8)	5.7 (14.6)
North Central	13.6 (4.3)	19.4 (6.7)	22.7 (8.3)	3.4 (4.4)	3.9 (8.2)	10.2 (11.8)
South	12.3 (4.2)	13.6 (6.0)	19.3 (7.9)	4.6 (4.2)	3.8 (8.0)	2.6 (11.4)
West	11.9 (4.9)	16.4 (7.6)	20.6 (9.0)	3.0 (5.4)	7.0 (11.3)	5.6 (12.3)

DRG CLUSTER: 2
CRANIOTOMY FOR TRAUMA AGE > 17
DRG(S): 2

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	17.6 (3.5)	28.7 (9.4)	33.3 (7.0)	9.6 (5.5)	7.4 (14.3)	10.3 (11.8)
Northeast	22.0 (7.3)	28.7 (18.7)	31.7 (14.9)	8.2 (14.2)	** (**)	** (**)
North Central	11.8 (7.5)	31.0 (19.1)	33.5 (15.0)	12.1 (12.5)	** (**)	** (**)
South	16.8 (6.1)	28.8 (16.8)	32.6 (12.2)	9.3 (8.3)	** (**)	22.6 (20.0)
West	20.1 (7.2)	** (**)	36.2 (14.9)	9.1 (11.8)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 3
CRANIOTOMY AGE<18
DRG(S): 3

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	8.8 (3.8)	-- (--)	-- (--)	2.0 (3.5)	-- (--)	-- (--)
Northeast	9.3 (9.1)	-- (--)	-- (--)	1.7 (9.5)	-- (--)	-- (--)
North Central	10.5 (8.0)	-- (--)	-- (--)	2.6 (8.1)	-- (--)	-- (--)
South	6.0 (5.8)	-- (--)	-- (--)	2.0 (4.9)	-- (--)	-- (--)
West	14.4 (9.1)	-- (--)	-- (--)	1.8 (9.0)	-- (--)	-- (--)

DRG CLUSTER: 4
SPINAL PROCEDURES
DRG(S): 4

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.0 (4.1)	7.3 (9.4)	9.6 (11.7)	0.2 (3.2)	0.8 (10.4)	0.0 (19.7)
Northeast	4.6 (10.6)	9.4 (19.4)	** (")	0.0 (8.4)	** (")	** (")
North Central	2.9 (8.5)	10.5 (17.8)	** (")	0.6 (6.1)	** (")	** (")
South	1.4 (6.7)	0.0 (18.2)	** (")	0.0 (5.2)	0.0 (18.7)	** (")
West	4.9 (8.7)	** (")	** (")	0.3 (6.8)	0.0 (19.5)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 6
CARPAL TUNNEL RELEASE
DRG(S): 6

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (10.1)	2.1 (18.6)	** (")	0.0 (4.7)	0.0 (12.5)	0.0 (14.3)
Northeast	0.0 (19.5)	** (")	** (")	0.0 (9.6)	** (")	** (")
North Central	0.0 (17.9)	** (")	** (")	0.0 (9.5)	** (")	** (")
South	0.0 (19.5)	** (")	** (")	0.0 (8.3)	** (")	** (")
West	** (")	** (")	** (")	0.0 (11.2)	** (")	** (")

DRG CLUSTER: 7
PERIPHERAL & CRANIAL NERVE & OTHER NERVE SYSTEM PROCEDURES
DRG(S): 7, 8

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.6 (3.7)	12.3 (6.4)	17.1 (6.1)	0.1 (2.1)	0.0 (6.9)	0.0 (9.6)
Northeast	10.5 (7.7)	20.0 (11.4)	25.6 (10.2)	0.1 (4.2)	0.0 (15.4)	0.0 (18.2)
North Central	5.1 (7.1)	5.5 (12.8)	12.7 (13.2)	0.2 (4.0)	0.0 (12.6)	0.0 (16.5)
South	3.5 (6.5)	10.9 (11.5)	13.6 (11.3)	0.2 (3.7)	0.0 (12.2)	0.0 (20.0)
West	4.1 (8.3)	5.0 (17.9)	5.7 (17.7)	0.1 (5.0)	0.0 (16.9)	** (")

NEUROLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 8
SPINAL DISORDERS & INJURIES
DRG(S): 9

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.6 (6.7)	5.7 (14.6)	23.8 (12.5)	0.0 (6.1)	** (")	** (")
Northeast	12.7 (16.5)	** (")	** (")	0.0 (14.3)	** (")	** (")
North Central	1.5 (14.7)	** (")	** (")	0.0 (12.7)	** (")	** (")
South	7.9 (11.1)	** (")	** (")	0.0 (9.9)	** (")	** (")
West	4.8 (12.8)	** (")	** (")	0.0 (13.2)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 10
DEGENERATIVE NERVOUS SYSTEM DISORDERS
DRG(S): 12

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.7 (4.4)	6.4 (4.5)	6.4 (3.5)	0.9 (4.0)	1.2 (5.2)	1.6 (4.2)
Northeast	6.3 (11.1)	8.4 (9.2)	4.9 (6.7)	2.3 (9.4)	1.9 (11.1)	4.4 (8.7)
North Central	5.5 (7.8)	6.7 (8.5)	4.8 (6.6)	0.8 (7.4)	1.2 (9.4)	0.9 (8.1)
South	9.6 (7.3)	7.0 (8.2)	7.7 (6.4)	0.8 (6.7)	1.5 (9.5)	0.5 (7.1)
West	7.8 (10.8)	1.4 (11.4)	8.4 (8.3)	0.0 (9.3)	0.0 (11.7)	1.5 (10.4)

DRG CLUSTER: 11
MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA
DRG(S): 13

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.8 (4.4)	1.3 (15.0)	2.0 (18.1)	0.0 (3.1)	1.5 (14.6)	2.3 (19.9)
Northeast	2.0 (8.8)	** (**)	** (**)	0.0 (6.3)	** (**)	** (**)
North Central	1.0 (7.0)	** (**)	** (**)	0.0 (4.9)	** (**)	** (**)
South	1.2 (9.5)	** (**)	** (**)	0.0 (6.2)	** (**)	** (**)
West	4.7 (12.0)	** (**)	** (**)	0.0 (8.8)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 16
NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS
DRG(S): 20

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	8.0 (3.4)	18.9 (8.6)	19.2 (7.5)	0.6 (2.8)	1.1 (11.0)	0.9 (11.9)
Northeast	14.3 (7.0)	15.3 (17.1)	28.1 (14.4)	0.9 (7.0)	** (")	** (")
North Central	5.2 (7.4)	14.0 (17.6)	14.7 (15.8)	0.6 (5.6)	** (")	** (")
South	6.6 (5.7)	24.8 (15.1)	22.3 (14.4)	0.7 (4.6)	0.0 (17.9)	** (")
West	6.1 (7.2)	** (")	8.8 (15.2)	0.0 (6.4)	** (")	** (")

DRG CLUSTER: 17
VIRAL MENINGITIS
DRG(S): 21

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.8 (4.8)	** (")	15.3 (20.0)	0.1 (2.4)	** (")	** (")
Northeast	0.7 (10.5)	** (")	** (")	0.0 (5.1)	** (")	** (")
North Central	0.1 (9.2)	** (")	** (")	0.2 (5.1)	** (")	** (")
South	3.7 (8.2)	** (")	** (")	0.0 (4.0)	** (")	** (")
West	1.5 (11.1)	** (")	** (")	0.2 (5.1)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 21
TRAUMATIC STUPOR & COMA, COMA >1 HOUR
DRG(S): 27

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	17.7 (3.7)	36.9 (13.2)	38.3 (10.0)	16.6 (4.6)	** (")	41.4 (16.7)
Northeast	19.7 (8.9)	** (")	52.0 (20.0)	13.8 (11.0)	** (")	** (")
North Central	16.5 (7.4)	** (")	32.7 (18.2)	12.2 (9.3)	** (")	** (")
South	18.0 (6.6)	** (")	36.2 (19.1)	18.9 (7.8)	** (")	** (")
West	17.0 (7.4)	** (")	** (")	20.6 (9.8)	** (")	** (")

DRG CLUSTER: 22
TRAUMATIC STUPOR & COMA, COMA<1 HOUR
DRG(S): 28, 29, 30

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.0 (2.2)	10.4 (7.1)	8.4 (4.8)	0.1 (1.7)	2.3 (9.4)	4.8 (7.4)
Northeast	1.1 (5.1)	21.4 (15.5)	11.6 (9.3)	0.0 (3.9)	2.7 (18.3)	4.8 (16.0)
North Central	0.5 (4.3)	5.1 (12.4)	7.1 (9.4)	0.1 (3.3)	5.1 (16.8)	2.1 (13.3)
South	1.5 (3.9)	8.9 (13.4)	7.6 (8.8)	0.1 (3.0)	0.0 (19.2)	4.6 (13.9)
West	0.5 (4.6)	7.5 (16.7)	6.8 (11.6)	0.1 (3.8)	** (")	10.3 (17.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 23
CONCUSSION
DRG(S): 31, 32, 33

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.6)	1.6 (8.5)	2.2 (6.1)	0.0 (1.4)	0.0 (6.9)	0.0 (6.4)
Northeast	0.0 (5.0)	0.0 (15.6)	4.7 (11.0)	0.0 (2.6)	0.0 (12.7)	0.0 (12.7)
North Central	0.0 (5.1)	0.0 (15.5)	3.7 (13.6)	0.0 (2.7)	0.0 (14.7)	0.0 (14.4)
South	0.0 (5.1)	0.0 (18.5)	0.1 (11.5)	0.0 (2.5)	0.0 (13.0)	0.0 (10.5)
West	0.0 (5.9)	9.3 (19.1)	0.0 (13.4)	0.0 (3.2)	0.0 (15.9)	0.0 (14.8)

DRG CLUSTER: 24
OTHER DISORDERS OF NERVOUS SYSTEM
DRG(S): 34, 35

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	10.3 (3.1)	15.2 (4.6)	16.0 (4.5)	1.1 (2.6)	1.2 (7.4)	0.8 (8.1)
Northeast	11.1 (6.8)	25.2 (10.2)	21.5 (8.9)	1.0 (6.0)	2.9 (17.4)	0.0 (16.3)
North Central	10.3 (5.6)	13.8 (8.9)	14.6 (8.7)	0.7 (5.0)	0.0 (13.3)	3.0 (14.4)
South	9.0 (5.4)	12.5 (8.6)	13.4 (8.5)	1.4 (4.1)	0.9 (12.4)	0.0 (16.5)
West	11.9 (7.2)	11.9 (9.6)	15.4 (10.0)	1.0 (6.7)	2.4 (19.2)	0.0 (18.1)

VASCULAR SURGERY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 5
EXTRACRANIAL VASCULAR PROCEDURES
DRG(S): 5

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.4 (3.6)	3.2 (2.8)	3.5 (3.5)	0.2 (2.9)	0.2 (2.6)	0.1 (3.7)
Northeast	3.6 (8.3)	5.6 (6.9)	3.4 (8.9)	0.0 (7.1)	0.0 (6.9)	0.0 (10.7)
North Central	3.6 (6.2)	1.6 (4.9)	5.9 (6.0)	0.2 (4.9)	0.1 (4.6)	0.3 (6.2)
South	4.0 (6.7)	3.2 (5.2)	2.5 (6.3)	0.4 (5.5)	0.3 (5.0)	0.0 (7.3)
West	2.0 (8.2)	3.7 (6.0)	1.3 (7.6)	0.0 (6.8)	0.2 (5.2)	0.0 (7.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 76
MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES W/O PUMP
DRG(S): 110, 111

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.8 (2.0)	8.3 (1.7)	13.0 (2.0)	0.3 (2.6)	1.3 (2.9)	2.2 (4.1)
Northeast	4.6 (4.1)	8.2 (3.4)	11.6 (4.0)	0.0 (5.8)	1.3 (6.3)	1.5 (8.8)
North Central	3.6 (3.7)	8.1 (3.3)	15.4 (3.9)	0.7 (4.7)	1.1 (5.3)	1.7 (7.5)
South	3.8 (3.9)	8.7 (3.3)	12.9 (3.8)	0.3 (4.7)	2.3 (5.6)	3.0 (7.9)
West	3.0 (4.9)	8.2 (3.9)	11.5 (4.9)	0.0 (6.4)	0.3 (6.5)	2.3 (9.3)

DRG CLUSTER: 77
VASCULAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION W/O PUMP
DRG(S): 112

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (1.2)	3.5 (1.6)	10.1 (2.2)	0.2 (1.2)	0.2 (1.9)	0.7 (3.3)
Northeast	1.4 (2.7)	4.1 (3.6)	11.1 (4.8)	0.1 (2.7)	0.1 (4.5)	0.0 (8.2)
North Central	1.5 (2.2)	3.4 (2.9)	11.7 (4.2)	0.1 (1.8)	0.3 (3.0)	1.4 (5.4)
South	1.7 (2.4)	4.4 (3.1)	10.6 (4.3)	0.9 (2.7)	0.2 (4.7)	0.0 (7.7)
West	0.9 (2.5)	2.2 (3.2)	6.4 (4.6)	0.1 (2.6)	0.1 (3.9)	0.9 (6.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 84
VEIN LIGATION & STRIPPING
DRG(S): 119

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (6.5)	3.3 (10.6)	3.2 (13.9)	0.0 (2.2)	0.0 (6.8)	0.0 (11.7)
Northeast	0.0 (12.1)	5.6 (19.5)	** (")	0.0 (4.0)	0.0 (11.6)	0.0 (18.6)
North Central	0.0 (12.7)	** (")	** (")	0.0 (4.0)	0.0 (13.8)	** (")
South	0.8 (12.0)	0.6 (19.9)	** (")	0.0 (4.4)	0.0 (14.3)	** (")
West	3.8 (16.9)	** (")	** (")	0.0 (5.3)	0.0 (15.2)	** (")

DRG CLUSTER: 85
OTHER CIRCULATORY SYSTEM O.R. PROCEDURES
DRG(S): 120

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.3 (3.5)	15.7 (3.8)	18.3 (3.9)	0.2 (5.7)	2.1 (9.0)	2.3 (8.4)
Northeast	10.2 (7.4)	23.2 (7.4)	22.3 (7.1)	0.0 (13.6)	** (")	0.0 (16.4)
North Central	6.5 (7.1)	15.2 (7.5)	16.8 (8.0)	0.8 (11.2)	2.0 (16.7)	3.1 (15.4)
South	5.1 (6.0)	11.9 (6.8)	11.1 (7.0)	0.0 (9.1)	1.4 (13.9)	3.5 (13.9)
West	3.5 (8.1)	12.5 (9.2)	28.1 (9.8)	0.0 (14.0)	** (")	** (")

GENERAL SURGERY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 78
AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB & TOE
DRG(S): 113

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.3 (3.5)	9.4 (3.2)	11.4 (2.5)	0.0 (12.5)	6.5 (12.5)	3.5 (8.1)
Northeast	9.8 (7.4)	12.8 (6.8)	15.3 (5.2)	** (")	** (")	8.2 (18.1)
North Central	7.8 (7.3)	8.9 (6.4)	11.5 (5.1)	** (")	** (")	3.0 (15.3)
South	6.5 (5.8)	7.8 (5.4)	9.6 (3.9)	0.0 (19.7)	8.3 (20.0)	3.0 (12.3)
West	5.0 (8.4)	9.7 (8.1)	11.8 (7.3)	** (")	** (")	** (")

DRG CLUSTER: 79
UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS
DRG(S): 114

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.4 (4.5)	3.0 (5.5)	8.8 (6.0)	0.0 (10.4)	0.0 (17.2)	0.0 (14.9)
Northeast	4.8 (8.7)	2.8 (10.9)	7.8 (11.4)	** (")	** (")	** (")
North Central	0.6 (9.0)	1.1 (10.3)	7.0 (12.3)	0.0 (17.8)	** (")	** (")
South	2.6 (8.3)	3.9 (10.2)	10.0 (10.1)	0.0 (17.4)	** (")	** (")
West	0.8 (10.9)	4.6 (13.2)	9.6 (16.1)	** (")	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 102
RECTAL RESECTION
DRG(S): 146, 147

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.1 (3.1)	5.2 (3.3)	9.6 (3.5)	0.0 (4.1)	0.2 (5.9)	0.7 (7.0)
Northeast	2.3 (6.2)	4.4 (6.0)	9.1 (6.5)	0.0 (8.9)	0.0 (11.3)	0.7 (12.8)
North Central	4.1 (6.1)	8.2 (6.5)	10.9 (6.6)	0.0 (7.9)	0.0 (11.4)	0.7 (13.9)
South	2.7 (6.2)	3.7 (6.4)	7.7 (6.9)	0.0 (7.3)	0.7 (12.1)	1.1 (13.8)
West	3.5 (6.6)	4.1 (7.6)	11.4 (7.9)	0.0 (9.1)	0.0 (12.5)	0.0 (15.7)

DRG CLUSTER: 103
MAJOR SMALL & LARGE BOWEL PROCEDURES
DRG(S): 148, 149

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.2 (1.3)	7.3 (1.5)	12.5 (1.3)	0.3 (1.6)	0.3 (2.6)	2.2 (3.0)
Northeast	4.1 (2.6)	7.0 (2.9)	14.4 (2.5)	0.3 (3.5)	0.1 (5.1)	1.4 (5.8)
North Central	4.7 (2.5)	8.5 (2.9)	11.2 (2.6)	0.1 (3.3)	0.5 (5.0)	1.6 (5.8)
South	4.5 (2.4)	7.3 (2.8)	13.0 (2.5)	0.5 (2.8)	0.3 (4.9)	3.2 (5.5)
West	3.3 (2.9)	6.4 (3.3)	10.3 (3.1)	0.0 (3.6)	0.0 (5.7)	2.5 (6.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 104
PERITONEAL ADHESIOLYSIS
DRG(S): 150, 151

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.2 (2.7)	6.0 (3.7)	10.4 (3.5)	0.0 (2.3)	0.2 (5.3)	2.2 (5.9)
Northeast	2.9 (6.2)	5.9 (7.9)	12.9 (7.3)	0.0 (5.3)	0.0 (11.6)	1.0 (12.4)
North Central	2.1 (4.9)	5.3 (7.2)	9.8 (6.9)	0.0 (4.4)	0.0 (9.7)	1.7 (11.3)
South	2.6 (4.9)	7.0 (6.6)	9.4 (6.5)	0.0 (3.7)	0.5 (10.1)	3.9 (10.8)
West	0.9 (6.0)	5.0 (8.1)	10.5 (7.9)	0.0 (5.3)	0.0 (11.6)	1.1 (13.6)

DRG CLUSTER: 105
MINOR SMALL & LARGE BOWEL PROCEDURES
DRG(S): 152, 153

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.6 (3.7)	3.7 (4.8)	5.0 (4.3)	0.0 (3.0)	0.5 (6.0)	0.0 (6.9)
Northeast	1.1 (7.2)	3.1 (9.9)	7.4 (8.5)	0.0 (6.3)	0.0 (11.9)	0.0 (12.2)
North Central	1.5 (7.3)	3.4 (8.9)	3.8 (7.9)	0.0 (6.0)	0.0 (11.7)	0.0 (14.7)
South	0.8 (7.1)	3.4 (9.6)	4.3 (8.4)	0.0 (5.2)	1.4 (11.0)	0.0 (13.4)
West	4.0 (8.2)	5.0 (10.6)	5.2 (9.4)	0.0 (6.9)	0.0 (13.6)	0.0 (15.8)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 106
STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES
DRG(S): 154, 155, 156

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.3 (1.6)	10.8 (2.2)	17.7 (2.1)	0.1 (1.9)	1.3 (4.6)	2.9 (5.0)
Northeast	6.4 (3.5)	12.8 (4.6)	20.0 (4.2)	0.2 (4.6)	2.1 (9.3)	1.3 (10.0)
North Central	5.0 (3.2)	11.8 (4.3)	16.6 (4.0)	0.2 (3.7)	1.4 (9.6)	4.0 (9.8)
South	5.3 (3.0)	10.1 (4.1)	18.2 (3.9)	0.0 (2.9)	0.4 (8.5)	3.3 (9.0)
West	4.5 (3.5)	8.4 (4.8)	15.3 (4.7)	0.1 (4.4)	2.1 (9.9)	2.6 (11.3)

DRG CLUSTER: 107
ANAL & STOMACH PROCEDURES
DRG(S): 157, 158

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (2.2)	0.9 (3.1)	2.3 (3.0)	0.0 (1.0)	0.0 (2.9)	0.0 (3.7)
Northeast	0.8 (4.2)	0.3 (6.2)	1.9 (5.5)	0.0 (2.1)	0.0 (5.4)	0.0 (6.5)
North Central	0.3 (4.5)	1.1 (6.3)	3.7 (6.1)	0.0 (2.2)	0.0 (6.0)	0.0 (7.9)
South	0.1 (3.7)	1.3 (5.4)	2.1 (5.3)	0.0 (1.7)	0.0 (5.1)	0.0 (6.7)
West	0.1 (5.3)	0.9 (8.0)	1.3 (8.0)	0.0 (2.6)	0.0 (7.1)	0.0 (9.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 108
HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL, AGES 18+
DRG(S): 159, 160

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (3.0)	1.2 (3.9)	2.0 (4.6)	0.0 (1.6)	0.0 (3.2)	0.1 (4.6)
Northeast	0.7 (6.1)	0.9 (8.2)	3.2 (8.5)	0.0 (3.2)	0.0 (6.4)	0.0 (9.1)
North Central	0.8 (5.9)	0.9 (8.2)	2.9 (9.1)	0.0 (3.1)	0.0 (6.5)	0.5 (8.8)
South	0.3 (5.4)	1.8 (6.7)	0.9 (9.0)	0.0 (2.8)	0.0 (5.9)	0.0 (8.7)
West	0.3 (6.8)	0.5 (8.6)	0.0 (11.1)	0.0 (4.0)	0.0 (7.4)	0.0 (10.6)

DRG CLUSTER: 109
INGUINAL & FEMORAL HERNIA PROCEDURES, AGES 18+
DRG(S): 161, 162

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (2.6)	0.6 (2.6)	1.6 (2.5)	0.0 (1.0)	0.0 (1.9)	0.0 (2.2)
Northeast	0.2 (4.5)	0.4 (4.5)	2.2 (4.5)	0.0 (1.8)	0.0 (3.2)	0.0 (3.8)
North Central	0.5 (5.1)	0.5 (5.3)	2.0 (5.1)	0.0 (1.9)	0.0 (3.7)	0.0 (4.3)
South	0.0 (4.6)	1.1 (4.4)	1.4 (4.6)	0.0 (1.7)	0.1 (3.4)	0.0 (4.2)
West	0.4 (7.9)	0.0 (7.6)	0.4 (6.8)	0.0 (3.4)	0.0 (5.6)	0.0 (6.2)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 110
HERNIA PROCEDURES, AGES 0-17
DRG(S): 163

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (7.6)	-- (--)	-- (--)	0.0 (2.3)	-- (--)	-- (--)
Northeast	0.0 (16.7)	-- (--)	-- (--)	0.0 (4.6)	-- (--)	-- (--)
North Central	0.0 (17.6)	-- (--)	-- (--)	0.0 (5.6)	-- (--)	-- (--)
South	0.0 (11.4)	-- (--)	-- (--)	0.0 (3.4)	-- (--)	-- (--)
West	0.0 (18.6)	-- (--)	-- (--)	0.0 (6.8)	-- (--)	-- (--)

DRG CLUSTER: 111
APPENDECTOMY W/ COMPLICATED PRIN. DX
DRG(S): 164, 165

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (2.7)	3.1 (6.6)	1.6 (8.0)	0.0 (1.8)	0.0 (7.9)	0.0 (11.2)
Northeast	0.0 (5.5)	8.8 (15.2)	1.4 (14.7)	0.0 (3.9)	0.0 (16.3)	** (")
North Central	0.2 (5.4)	2.3 (13.2)	1.7 (16.9)	0.0 (3.6)	0.0 (16.2)	** (")
South	0.6 (5.2)	1.7 (12.0)	2.4 (14.4)	0.0 (3.5)	0.0 (15.2)	** (")
West	0.4 (5.4)	1.2 (12.9)	0.0 (18.9)	0.0 (3.4)	0.0 (15.7)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 112
APPENDECTOMY W/O COMPLICATED PRIN. DX
DRG(S): 166, 167

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.7)	3.0 (9.3)	4.6 (11.7)	0.0 (0.8)	0.0 (7.5)	0.0 (11.1)
Northeast	0.0 (5.9)	0.0 (19.2)	** (")	0.0 (1.9)	0.0 (17.8)	0.0 (19.9)
North Central	0.0 (5.4)	6.8 (19.4)	** (")	0.0 (1.6)	0.0 (15.2)	** (")
South	0.0 (5.3)	0.0 (16.8)	** (")	0.0 (1.5)	0.0 (13.6)	** (")
West	0.0 (5.3)	7.1 (19.5)	** (")	0.0 (1.6)	0.0 (14.2)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 114
OTHER DIGESTIVE SYSTEM O.R. PROCEDURES
DRG(S): 170, 171

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.4 (3.1)	18.4 (4.4)	29.2 (4.4)	0.5 (2.7)	6.6 (8.7)	26.0 (11.2)
Northeast	14.8 (6.5)	30.6 (8.9)	34.7 (8.8)	0.3 (6.2)	4.3 (17.6)	** (**)
North Central	9.2 (6.0)	14.6 (8.2)	24.6 (8.8)	0.4 (5.4)	0.0 (17.4)	** (**)
South	13.4 (5.5)	14.4 (8.7)	29.0 (8.3)	0.7 (4.7)	11.6 (15.5)	** (**)
West	6.9 (6.9)	14.3 (9.5)	28.3 (9.8)	0.7 (5.8)	9.6 (19.5)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 125
MAJOR PANCREAS, LIVER & SHUNT PROCEDURES
DRG(S): 191

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	13.5 (3.1)	12.3 (5.5)	22.1 (7.7)	1.2 (6.0)	2.7 (13.9)	** (**)
Northeast	13.4 (6.8)	14.5 (11.2)	16.5 (14.7)	0.0 (14.4)	** (**)	** (**)
North Central	13.1 (5.5)	14.0 (10.5)	16.2 (16.6)	0.0 (12.4)	** (**)	** (**)
South	12.9 (5.9)	10.9 (10.2)	30.6 (13.0)	2.5 (9.9)	** (**)	** (**)
West	15.0 (6.5)	9.8 (12.3)	17.3 (19.1)	0.8 (13.0)	** (**)	** (**)

DRG CLUSTER: 126
MINOR PANCREAS, LIVER & SHUNT PROCEDURES
DRG(S): 192

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	8.0 (5.7)	14.3 (9.8)	18.3 (10.3)	0.0 (8.8)	** (**)	** (**)
Northeast	6.0 (10.8)	18.7 (16.9)	17.6 (18.1)	** (**)	** (**)	** (**)
North Central	8.6 (11.9)	9.8 (19.7)	** (**)	0.0 (17.0)	** (**)	** (**)
South	10.1 (9.8)	14.4 (18.5)	17.8 (19.1)	0.0 (15.4)	** (**)	** (**)
West	6.0 (14.4)	** (**)	** (**)	0.0 (18.7)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 127
BILIARY TRACT PROCEDURES EXCEPT TOTAL CHOLECYSTECTOMY
DRG(S): 193, 194

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.1 (5.0)	10.6 (5.2)	16.7 (4.6)	0.0 (6.6)	0.6 (9.3)	1.7 (9.4)
Northeast	4.3 (10.5)	14.4 (10.3)	17.7 (8.3)	0.0 (17.0)	** (")	0.0 (18.1)
North Central	12.1 (10.3)	11.9 (10.1)	10.5 (9.5)	0.0 (14.3)	1.7 (19.2)	2.1 (19.1)
South	4.1 (8.6)	6.7 (9.9)	20.3 (8.7)	0.0 (9.8)	0.0 (15.2)	1.8 (17.0)
West	5.1 (11.6)	10.5 (11.9)	17.4 (11.0)	0.0 (16.1)	** (")	** (")

DRG CLUSTER: 128
TOTAL CHOLECYSTECTOMY W/ C.D.E.
DRG(S): 195, 196

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (2.1)	2.7 (3.0)	5.8 (2.8)	0.0 (3.3)	0.0 (7.1)	0.7 (7.9)
Northeast	0.2 (4.6)	2.4 (6.3)	9.3 (5.8)	0.0 (7.8)	0.0 (15.6)	2.3 (18.3)
North Central	0.6 (4.3)	2.1 (6.0)	3.8 (5.6)	0.0 (6.6)	0.0 (14.5)	1.4 (14.5)
South	0.6 (3.7)	3.7 (5.4)	5.4 (5.0)	0.0 (5.5)	0.0 (12.2)	0.0 (12.8)
West	0.8 (4.6)	1.9 (6.7)	5.5 (6.3)	0.0 (7.0)	0.0 (15.8)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 129
TOTAL CHOLECYSTECTOMY W/O C.D.E.
DRG(S): 197, 198

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (1.0)	2.0 (1.7)	4.1 (2.1)	0.0 (0.8)	0.0 (2.1)	0.3 (3.3)
Northeast	0.2 (2.3)	1.8 (3.8)	3.2 (4.7)	0.0 (1.8)	0.0 (4.7)	0.0 (7.1)
North Central	0.3 (1.9)	2.0 (3.3)	4.2 (4.0)	0.0 (1.5)	0.0 (3.9)	0.0 (6.4)
South	0.7 (1.7)	2.0 (2.9)	5.0 (3.6)	0.0 (1.4)	0.1 (3.7)	0.7 (5.6)
West	0.2 (2.1)	1.8 (3.9)	2.9 (4.8)	0.0 (1.7)	0.0 (4.6)	0.3 (7.5)

DRG CLUSTER: 130
HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY
DRG(S): 199

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.9 (7.3)	17.9 (7.3)	35.4 (8.2)	2.5 (12.0)	10.9 (19.9)	7.3 (19.9)
Northeast	19.5 (15.0)	20.9 (15.5)	43.4 (16.5)	** (")	** (")	** (")
North Central	4.4 (13.9)	23.5 (15.1)	32.9 (15.1)	** (")	** (")	** (")
South	11.0 (13.4)	13.5 (12.8)	39.2 (16.5)	0.0 (18.5)	** (")	** (")
West	14.7 (16.8)	15.3 (16.2)	23.5 (17.9)	** (")	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 131
HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY
DRG(S): 200

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.2 (6.1)	22.4 (10.7)	25.7 (13.6)	0.4 (8.0)	0.0 (19.2)	** (**)
Northeast	14.9 (13.5)	** (**)	** (**)	0.0 (18.3)	** (**)	** (**)
North Central	11.0 (12.0)	** (**)	** (**)	1.9 (17.2)	** (**)	** (**)
South	9.4 (11.0)	34.7 (18.2)	** (**)	0.0 (12.1)	** (**)	** (**)
West	11.1 (13.2)	** (**)	** (**)	** (**)	** (**)	** (**)

DRG CLUSTER: 132
OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES
DRG(S): 201

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	15.9 (4.2)	17.5 (6.9)	24.3 (9.6)	2.6 (14.8)	** (**)	** (**)
Northeast	16.0 (7.7)	28.7 (12.1)	22.7 (17.6)	** (**)	** (**)	** (**)
North Central	16.5 (8.5)	14.8 (13.7)	** (**)	** (**)	** (**)	** (**)
South	17.2 (8.7)	12.9 (16.4)	26.5 (17.4)	** (**)	** (**)	** (**)
West	13.3 (8.8)	10.2 (14.3)	** (**)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 143
WOUND DEBRID. & SKIN GRAFT EXCEPT HND, FOR MUSCULO. & CONN. TISS. DIS.
DRG(S): 217

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (2.4)	5.7 (5.0)	11.9 (4.7)	0.0 (1.9)	0.0 (7.2)	0.0 (9.4)
Northeast	1.9 (5.1)	5.8 (9.8)	16.6 (8.0)	0.0 (4.3)	0.0 (16.2)	** (")
North Central	1.6 (4.7)	5.3 (9.7)	8.2 (10.1)	0.1 (3.4)	0.0 (13.5)	0.0 (16.2)
South	0.9 (4.4)	6.9 (9.1)	11.8 (8.6)	0.0 (3.3)	0.0 (12.3)	0.0 (18.1)
West	1.5 (5.4)	3.6 (11.9)	5.4 (11.8)	0.0 (4.4)	0.0 (17.6)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 172
TOTAL MASTECTOMY FOR MALIGNANCY
DRG(S): 257, 258

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (2.1)	0.2 (2.6)	0.5 (2.9)	0.0 (1.6)	0.1 (2.3)	0.0 (2.9)
Northeast	0.3 (4.3)	0.0 (5.3)	0.4 (5.7)	0.0 (3.6)	0.2 (5.1)	0.0 (6.3)
North Central	0.2 (4.0)	0.6 (5.3)	0.4 (5.7)	0.0 (3.2)	0.0 (4.6)	0.0 (5.3)
South	0.1 (3.9)	0.1 (4.8)	0.6 (5.5)	0.0 (3.0)	0.0 (4.3)	0.0 (5.4)
West	0.0 (4.4)	0.1 (5.8)	0.7 (7.0)	0.0 (3.4)	0.2 (4.9)	0.0 (6.4)

DRG CLUSTER: 173
SUBTOTAL MASTECTOMY FOR MALIGNANCY
DRG(S): 259, 260

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.7 (5.7)	3.9 (7.1)	4.5 (7.2)	0.0 (3.6)	0.0 (6.2)	0.0 (6.8)
Northeast	0.8 (9.9)	2.0 (10.5)	4.0 (11.1)	0.0 (5.9)	0.0 (9.2)	0.0 (9.8)
North Central	5.7 (10.8)	1.6 (15.6)	5.0 (14.2)	0.0 (7.4)	0.0 (12.7)	0.0 (15.6)
South	4.1 (11.4)	12.6 (15.5)	4.8 (14.8)	0.0 (7.5)	0.0 (16.3)	0.0 (15.6)
West	0.0 (14.6)	* (*)	* (*)	0.0 (8.4)	0.0 (15.5)	0.0 (18.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 174
BREAST PROCEDURES FOR NON-MALIG. EXCEPT BIOPSY & LOC. EXCISION
DRG(S): 261

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (5.6)	0.0 (13.9)	2.3 (18.5)	0.0 (1.6)	0.0 (6.5)	0.0 (11.9)
Northeast	0.0 (11.5)	** (")	** (")	0.0 (3.3)	0.0 (13.4)	** (")
North Central	0.0 (12.7)	** (")	** (")	0.0 (3.2)	0.0 (13.8)	** (")
South	0.0 (11.9)	** (")	** (")	0.0 (3.0)	0.0 (13.0)	0.0 (19.7)
West	0.0 (9.7)	** (")	** (")	0.0 (3.4)	0.0 (12.3)	** (")

DRG CLUSTER: 175
BREAST BIOPSY & LOCAL EXCISION FOR NON-MALIGNANCY
DRG(S): 262

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (7.7)	0.0 (12.5)	0.0 (14.4)	0.0 (3.3)	0.0 (7.7)	0.0 (10.6)
Northeast	0.0 (14.6)	** (")	** (")	0.0 (5.0)	0.0 (11.3)	0.0 (13.7)
North Central	0.0 (18.1)	** (")	** (")	0.0 (9.8)	** (")	** (")
South	0.0 (11.7)	** (")	** (")	0.0 (5.2)	0.0 (12.8)	0.0 (19.2)
West	** (")	** (")	** (")	0.0 (12.1)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 176
SKIN GRAFTS &/OR DEBRIDEMENT FOR SKIN ULCER OR CELLULITIS
DRG(S): 263, 264

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.1 (2.4)	5.6 (3.6)	12.9 (2.7)	0.0 (3.2)	0.0 (6.7)	2.9 (5.8)
Northeast	2.9 (4.8)	6.7 (6.6)	18.3 (4.9)	0.0 (6.7)	0.0 (13.0)	0.9 (12.2)
North Central	1.4 (4.5)	3.5 (7.5)	8.0 (5.3)	0.0 (6.0)	0.0 (13.9)	1.5 (11.1)
South	1.8 (4.4)	6.5 (6.6)	11.6 (4.7)	0.0 (6.0)	0.0 (11.9)	5.0 (10.2)
West	2.4 (6.4)	4.5 (9.0)	13.7 (7.7)	0.0 (7.9)	0.0 (15.7)	2.6 (13.9)

DRG CLUSTER: 177
SKIN GRAFTS &/OR DEBRIDEMENT EXCEPT SKIN ULCER OR CELLULITIS
DRG(S): 265, 266

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.5 (3.5)	1.9 (6.8)	3.4 (6.1)	0.0 (1.9)	0.0 (5.5)	1.3 (5.7)
Northeast	0.7 (7.1)	0.0 (13.0)	3.6 (10.4)	0.0 (4.0)	0.0 (10.4)	0.0 (10.9)
North Central	1.0 (7.0)	3.9 (13.0)	4.4 (14.5)	0.0 (3.6)	0.0 (11.1)	0.0 (12.5)
South	2.6 (6.3)	1.3 (12.6)	3.2 (10.7)	0.1 (3.3)	0.0 (10.5)	3.3 (9.6)
West	1.0 (8.3)	3.4 (16.8)	1.9 (15.9)	0.0 (4.5)	0.0 (11.9)	0.0 (13.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 178
PERIANAL & PILONIDAL PROCEDURES
DRG(S): 267

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (9.3)	** (")	** (")	0.0 (2.5)	** (")	** (")
Northeast	0.0 (16.1)	** (")	** (")	0.0 (4.1)	** (")	** (")
North Central	** (")	** (")	-- (--)	0.0 (5.6)	** (")	** (")
South	0.0 (16.5)	** (")	** (")	0.0 (4.4)	** (")	** (")
West	** (")	** (")	** (")	0.0 (8.4)	** (")	** (")

DRG CLUSTER: 179
SKIN, SUBCUTANEOUS TISS. & BREAST PLASTIC PROCEDURES
DRG(S): 268

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (7.0)	0.0 (17.0)	1.9 (17.4)	0.0 (3.3)	0.0 (8.2)	0.0 (11.8)
Northeast	0.0 (14.3)	** (")	** (")	0.0 (6.1)	0.0 (13.8)	0.0 (18.7)
North Central	0.0 (13.4)	** (")	** (")	0.0 (6.6)	0.0 (18.2)	** (")
South	1.1 (13.2)	** (")	** (")	0.0 (5.9)	0.0 (15.3)	** (")
West	0.0 (15.9)	** (")	** (")	0.0 (8.8)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 180
OTHER SKIN, SUBCUT. TISS. & BREAST O.R. PROCEDURES
DRG(S): 269, 270

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	1.5 (3.0)	2.4 (5.4)	4.2 (5.1)	0.1 (1.9)	0.0 (5.1)	0.0 (7.2)
Northeast	0.7 (6.2)	4.6 (10.0)	5.7 (9.4)	0.0 (3.7)	0.0 (9.7)	0.0 (13.8)
North Central	2.5 (5.7)	0.8 (10.9)	4.5 (9.9)	0.0 (3.7)	0.0 (9.8)	0.0 (13.8)
South	1.0 (5.2)	1.8 (9.8)	3.3 (9.7)	0.1 (3.3)	0.0 (9.3)	0.0 (12.5)
West	2.0 (7.2)	1.3 (13.8)	2.5 (13.2)	0.0 (4.7)	0.0 (13.1)	* (*)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 188
AMPUTATION OF LOWER LIMB FOR ENDOCRINE, NUTRIT. & METABOLIC DISORDERS
DRG(S): 285

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.6 (6.2)	6.2 (9.1)	15.0 (9.8)	** (**)	** (**)	** (**)
Northeast	6.2 (12.3)	5.5 (16.5)	23.8 (18.2)	** (**)	** (**)	** (**)
North Central	2.4 (13.4)	10.9 (19.4)	14.7 (18.9)	** (**)	** (**)	** (**)
South	2.4 (11.0)	3.0 (17.4)	12.1 (17.7)	** (**)	** (**)	** (**)
West	3.9 (13.4)	** (**)	** (**)	** (**)	** (**)	** (**)

DRG CLUSTER: 189
ADRENAL & PITUITARY PROCEDURES
DRG(S): 286

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.5 (7.2)	6.7 (13.4)	6.8 (17.6)	0.0 (6.4)	** (**)	** (**)
Northeast	3.7 (16.3)	** (**)	** (**)	0.0 (15.2)	** (**)	** (**)
North Central	1.6 (14.2)	** (**)	** (**)	0.0 (13.2)	** (**)	** (**)
South	0.3 (12.3)	** (**)	** (**)	0.0 (10.4)	** (**)	** (**)
West	1.7 (15.7)	** (**)	** (**)	0.0 (14.2)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 190
SKIN GRAFTS & WOUND DEBRIDEMENT, ENDOC., NUTRIT. & META. DISORDERS
DRG(S): 287

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (4.1)	5.3 (6.1)	14.8 (6.1)	0.0 (15.0)	** (")	** (")
Northeast	2.0 (8.3)	4.6 (11.6)	20.4 (10.1)	** (")	** (")	** (")
North Central	2.4 (7.9)	9.8 (11.6)	13.6 (12.4)	** (")	** (")	** (")
South	1.8 (7.5)	2.8 (11.0)	10.9 (10.9)	** (")	** (")	** (")
West	1.5 (9.7)	5.6 (15.6)	9.9 (19.9)	** (")	** (")	** (")

DRG CLUSTER: 191
O.R. PROCEDURES FOR OBESITY
DRG(S): 288

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (5.1)	** (")	** (")	0.0 (3.2)	** (")	** (")
Northeast	0.0 (10.7)	** (")	** (")	0.0 (7.2)	** (")	-- (--)
North Central	0.1 (9.1)	-- (--)	** (")	0.0 (6.1)	-- (--)	** (")
South	1.0 (9.3)	** (")	** (")	0.0 (5.1)	** (")	** (")
West	1.3 (12.9)	-- (--)	** (")	0.0 (8.9)	** (")	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 192
PARATHYROID PROCEDURES
DRG(S): 289

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (8.9)	1.0 (12.2)	5.5 (15.7)	0.0 (5.2)	0.0 (8.9)	0.0 (12.2)
Northeast	** (")	** (")	** (")	0.0 (11.5)	** (")	** (")
North Central	0.0 (16.9)	** (")	** (")	0.0 (10.6)	0.0 (17.2)	** (")
South	0.0 (15.6)	** (")	** (")	0.0 (9.8)	0.0 (15.6)	** (")
West	0.0 (18.7)	** (")	** (")	0.0 (10.2)	0.0 (17.1)	** (")

DRG CLUSTER: 193
THYROID PROCEDURES
DRG(S): 290

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (4.5)	0.4 (8.4)	3.5 (9.7)	0.0 (1.7)	0.0 (4.8)	0.0 (8.1)
Northeast	0.0 (9.6)	0.0 (16.2)	** (")	0.0 (4.0)	0.0 (11.2)	0.0 (20.0)
North Central	0.0 (8.4)	2.0 (17.3)	5.4 (18.7)	0.0 (3.4)	0.0 (8.8)	0.0 (14.6)
South	0.0 (8.9)	0.0 (14.3)	3.3 (16.5)	0.0 (3.1)	0.0 (8.6)	0.0 (14.8)
West	0.0 (8.9)	** (")	** (")	0.0 (3.5)	0.0 (10.0)	0.0 (16.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 194
THYROGLOSSAL PROCEDURES
DRG(S): 291

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	** (**)	-- (--)	** (**)	0.0 (6.1)	** (**)	** (**)
Northeast	** (**)	-- (--)	-- (--)	0.0 (11.3)	** (**)	-- (--)
North Central	** (**)	-- (--)	-- (--)	0.0 (12.0)	** (**)	** (**)
South	** (**)	-- (--)	** (**)	0.0 (11.9)	** (**)	-- (--)
West	** (**)	-- (--)	-- (--)	0.0 (13.6)	-- (--)	** (**)

DRG CLUSTER: 195
OTHER ENDOCRINE, NUTRIT. & META. O.R. PROCEDURES
DRG(S): 292, 293

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.7 (5.4)	10.2 (7.2)	16.6 (7.5)	0.0 (8.4)	2.4 (19.7)	0.0 (18.2)
Northeast	2.6 (11.8)	13.7 (15.3)	17.6 (14.0)	0.0 (17.1)	** (**)	** (**)
North Central	5.1 (10.3)	6.2 (14.8)	25.0 (14.8)	0.0 (15.8)	** (**)	** (**)
South	6.1 (9.4)	8.8 (12.2)	13.2 (13.6)	0.0 (13.9)	** (**)	** (**)
West	3.4 (12.4)	13.4 (16.5)	6.9 (19.1)	** (**)	-- (--)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 221
CIRCUMCISION
DRG(S): 342, 343

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	0.0 (10.4)	** (")	5.1 (17.9)	0.0 (8.3)	** (")	** (")
Northeast	0.0 (17.8)	** (")	** (")	0.0 (12.8)	** (")	** (")
North Central	** (")	** (")	** (")	0.0 (19.9)	** (")	** (")
South	0.0 (15.3)	** (")	** (")	0.0 (14.2)	** (")	** (")
West	** (")	-- (--)	** (")	** (")	** (")	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 264
SPLENECTOMY
DRG(S): 392, 393

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.0 (3.9)	13.9 (10.6)	14.9 (12.8)	0.0 (4.7)	** (")	** (")
Northeast	4.7 (7.9)	** (")	** (")	0.0 (11.2)	** (")	** (")
North Central	3.6 (7.8)	** (")	** (")	0.0 (9.3)	** (")	** (")
South	3.2 (7.1)	** (")	** (")	0.0 (7.9)	** (")	** (")
West	4.7 (8.3)	** (")	** (")	0.0 (10.3)	** (")	** (")

DRG CLUSTER: 265
OTHER O.R. PROCEDURES OF BLOOD & BLOOD FORMING ORGANS
DRG(S): 394

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.9 (6.6)	10.9 (15.2)	8.3 (17.0)	0.0 (4.0)	0.0 (13.3)	** (")
Northeast	2.1 (14.9)	** (")	** (")	0.0 (7.3)	** (")	** (")
North Central	1.2 (12.7)	** (")	** (")	0.0 (8.6)	** (")	** (")
South	1.0 (11.1)	** (")	** (")	0.0 (7.3)	** (")	** (")
West	11.6 (15.7)	** (")	** (")	0.0 (10.0)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 269
LYMPHOMA & LEUKEMIA W/ MAJOR O.R. PROCEDURES
DRG(S): 400

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	14.0 (4.0)	15.1 (5.7)	18.0 (7.3)	0.4 (3.9)	0.5 (7.9)	2.5 (10.2)
Northeast	14.0 (8.7)	13.1 (10.9)	12.0 (13.9)	0.6 (8.7)	2.3 (15.4)	2.8 (19.7)
North Central	13.7 (6.7)	13.4 (11.6)	17.6 (15.8)	0.9 (7.2)	0.0 (15.7)	** (")
South	16.0 (7.8)	15.2 (10.5)	24.3 (13.3)	0.0 (6.9)	0.0 (15.6)	3.2 (18.3)
West	11.6 (9.1)	19.8 (13.0)	15.3 (16.2)	0.0 (9.0)	0.0 (16.3)	** (")

DRG CLUSTER: 270
LYMPHOMA & NON-ACUTE LEUKEMIA W/ OTHER PROCEDURES
DRG(S): 401, 402

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.9 (4.8)	12.2 (5.6)	13.3 (6.0)	0.1 (4.3)	0.7 (7.2)	0.4 (7.9)
Northeast	15.9 (9.7)	9.4 (11.0)	18.7 (11.1)	0.0 (8.1)	1.0 (12.5)	0.0 (15.2)
North Central	5.9 (8.9)	12.1 (10.4)	13.6 (11.5)	0.5 (8.1)	0.0 (14.8)	1.4 (14.3)
South	11.8 (8.8)	17.5 (10.9)	9.5 (11.3)	0.0 (8.5)	0.0 (15.2)	0.0 (17.1)
West	15.6 (12.0)	8.8 (12.7)	9.4 (15.1)	0.0 (10.6)	1.8 (15.7)	0.0 (17.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 273
MYELOPROLIF. DIS. OR POORLY DIFF. NEOPLASM W/ MAJOR O.R. PROCEDURES
DRG(S): 406, 407

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	10.3 (4.8)	14.1 (6.4)	23.3 (7.8)	0.0 (5.8)	1.3 (9.8)	0.0 (16.8)
Northeast	12.2 (9.5)	13.3 (12.5)	27.1 (14.9)	0.0 (12.4)	** (")	** (")
North Central	11.1 (8.4)	18.9 (11.9)	21.4 (14.4)	0.0 (11.1)	2.2 (17.7)	** (")
South	10.6 (9.6)	11.3 (11.9)	27.2 (14.7)	0.0 (10.5)	0.0 (18.7)	** (")
West	5.8 (12.2)	12.5 (15.6)	12.2 (19.4)	0.0 (13.3)	** (")	** (")

DRG CLUSTER: 274
MYELOPROLIF. DIS. OR POORLY DIFF. NEOPLASM W/ OTHER O.R. PROCEDURES
DRG(S): 408

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.4 (4.4)	6.9 (5.2)	10.5 (6.9)	0.3 (3.7)	0.2 (5.6)	1.0 (7.3)
Northeast	6.1 (9.7)	7.1 (10.5)	14.4 (13.1)	0.0 (8.2)	0.0 (11.6)	3.3 (14.0)
North Central	6.5 (7.3)	9.1 (9.2)	16.4 (14.2)	0.7 (6.8)	1.0 (11.0)	0.0 (15.3)
South	8.9 (8.5)	5.7 (10.3)	6.1 (13.4)	0.3 (6.5)	0.0 (10.3)	0.0 (14.0)
West	2.4 (10.5)	5.0 (12.6)	4.4 (15.2)	0.2 (8.8)	0.0 (11.8)	0.0 ( )

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 280
O.R. PROCEDURES FOR INFECTIOUS & PARASITIC DISEASES
DRG(S): 415

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	9.5 (2.6)	17.1 (3.7)	20.0 (3.3)	0.1 (3.1)	1.3 (7.3)	0.0 (9.6)
Northeast	9.5 (5.8)	17.4 (7.5)	25.3 (6.8)	0.0 (7.5)	0.0 (15.8)	0.0 (19.7)
North Central	10.9 (4.8)	18.7 (6.8)	22.1 (6.1)	0.0 (6.1)	0.0 (14.5)	0.0 (18.3)
South	8.2 (4.9)	16.4 (6.7)	15.4 (6.1)	0.0 (5.3)	3.1 (12.5)	0.0 (17.9)
West	9.7 (5.8)	15.5 (8.7)	19.6 (8.2)	0.2 (6.2)	0.0 (16.3)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 287
O.R. PROCEDURES W/ PRIN. DX OF MENTAL ILLNESS
DRG(S): 424

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.3 (5.9)	11.0 (9.9)	4.6 (8.5)	0.0 (4.4)	0.0 (13.3)	0.0 (14.2)
Northeast	1.6 (15.8)	9.3 (19.2)	8.8 (15.0)	0.0 (12.7)	** (")	** (")
North Central	0.6 (9.9)	** (")	2.7 (18.2)	0.0 (7.9)	** (")	** (")
South	2.1 (10.3)	17.4 (16.4)	3.6 (14.7)	0.0 (8.0)	** (")	** (")
West	0.0 (14.6)	** (")	** (")	0.0 (8.6)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 302
SKIN GRAFTS FOR INJURIES
DRG(S): 439

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.0 (10.8)	** (")	** (")	0.0 (6.0)	0.0 (17.6)	** (")
Northeast	** (")	** (")	** (")	0.0 (13.5)	** (")	** (")
North Central	0.0 (19.5)	** (")	** (")	0.0 (12.2)	** (")	** (")
South	0.0 (18.7)	** (")	** (")	0.0 (9.8)	** (")	** (")
West	** (")	** (")	** (")	0.0 (14.4)	** (")	** (")

DRG CLUSTER: 303
WOUND DEBRIDEMENTS FOR INJURIES
DRG(S): 440

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.7 (3.6)	8.5 (7.1)	5.2 (7.6)	0.0 (2.4)	0.0 (8.5)	0.0 (10.4)
Northeast	2.6 (8.4)	10.5 (14.0)	12.9 (14.8)	0.0 (5.8)	0.0 (19.1)	** (")
North Central	1.9 (6.8)	1.2 (12.2)	2.3 (14.8)	0.0 (4.2)	0.0 (14.9)	0.0 (17.7)
South	2.1 (6.8)	18.1 (13.5)	2.6 (13.5)	0.0 (4.3)	0.0 (16.9)	** (")
West	0.4 (7.2)	0.0 (18.6)	** (")	0.0 (5.7)	0.0 (17.7)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 304
HAND PROCEDURES FOR INJURIES
DRG(S): 441

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (10.4)	** (")	** (")	0.0 (3.3)	0.0 (12.0)	** (")
Northeast	** (")	** (")	** (")	0.0 (7.4)	** (")	** (")
North Central	0.0 (18.1)	** (")	** (")	0.0 (5.7)	** (")	** (")
South	** (")	** (")	** (")	0.0 (6.4)	** (")	** (")
West	** (")	** (")	** (")	0.0 (7.1)	** (")	** (")

DRG CLUSTER: 305
OTHER O.R. PROCEDURES FOR INJURIES
DRG(S): 442, 443

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.5 (1.7)	4.3 (2.6)	5.8 (3.0)	0.1 (1.6)	0.3 (3.6)	0.5 (4.4)
Northeast	1.7 (3.8)	4.8 (5.5)	6.0 (6.1)	0.1 (3.5)	0.0 (7.9)	0.8 (9.2)
North Central	2.4 (3.4)	2.6 (5.4)	3.7 (5.8)	0.0 (3.0)	0.0 (6.5)	0.4 (7.6)
South	2.8 (3.0)	5.4 (4.8)	6.7 (5.6)	0.2 (2.9)	1.0 (7.0)	0.5 (9.1)
West	2.8 (3.5)	3.8 (5.3)	6.6 (6.5)	0.0 (3.5)	0.0 (7.5)	0.0 (9.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 312
EXTENSIVE BURNS W/O O.R. PROCEDURES
DRG(S): 457

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	** (")	** (")	** (")	** (")	** (")	-- (--)
Northeast	** (")	-- (--)	** (")	** (")	** (")	-- (--)
North Central	** (")	** (")	** (")	** (")	-- (--)	-- (--)
South	** (")	** (")	** (")	** (")	-- (--)	-- (--)
West	** (")	-- (--)	-- (--)	** (")	-- (--)	-- (--)

DRG CLUSTER: 313
NON-EXTENSIVE BURNS W/ SKIN GRAFTS
DRG(S): 458

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.7 (6.3)	3.0 (15.6)	12.4 (14.4)	0.0 (4.2)	** (")	4.3 (18.7)
Northeast	3.3 (10.2)	** (")	** (")	0.0 (8.3)	** (")	** (")
North Central	0.9 (12.6)	** (")	** (")	0.0 (8.0)	** (")	** (")
South	0.0 (12.1)	** (")	** (")	0.0 (7.2)	** (")	** (")
West	** (")	** (")	** (")	0.0 (12.6)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 314
NON-EXTENSIVE BURNS W/ WOUND DEBRIDEMENT OR OTHER O.R. PROCEDURES
DRG(S): 459

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.0 (9.7)	** (**)	17.6 (19.5)	0.1 (4.8)	** (**)	** (**)
Northeast	0.0 (19.2)	** (**)	** (**)	0.0 (10.7)	** (**)	** (**)
North Central	0.0 (20.0)	** (**)	** (**)	0.0 (9.3)	-- (--)	** (**)
South	4.8 (15.9)	** (**)	** (**)	0.3 (7.8)	** (**)	** (**)
West	** (**)	** (**)	** (**)	0.0 (12.4)	** (**)	** (**)

DRG CLUSTER: 315
NON-EXTENSIVE BURNS W/O O.R. PROCEDURES
DRG(S): 460

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (5.9)	6.0 (13.9)	4.9 (13.2)	0.1 (2.6)	1.0 (14.7)	0.0 (18.6)
Northeast	2.1 (9.9)	** (**)	** (**)	0.4 (5.4)	** (**)	** (**)
North Central	0.9 (12.8)	** (**)	** (**)	0.0 (5.0)	** (**)	** (**)
South	1.1 (10.2)	** (**)	7.8 (18.9)	0.0 (4.0)	** (**)	** (**)
West	0.0 (18.2)	** (**)	** (**)	0.0 (8.0)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 316
O.R. PROCEDURES W/ DXS OF OTHER CONTACT W/ HEALTH SERVICES
DRG(S): 461

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	1.4 (4.4)	3.7 (6.6)	6.3 (7.1)	0.1 (2.7)	0.6 (6.9)	0.7 (7.5)
Northeast	0.0 (9.5)	2.7 (12.3)	3.4 (13.3)	0.0 (5.7)	0.0 (13.2)	0.0 (13.1)
North Central	1.7 (7.2)	2.9 (12.5)	0.0 (14.1)	0.2 (4.9)	2.2 (12.6)	0.0 (15.4)
South	2.9 (9.6)	9.4 (14.6)	19.0 (13.8)	0.0 (5.8)	0.0 (18.6)	3.3 (17.3)
West	0.7 (9.8)	1.3 (13.9)	1.7 (15.6)	0.2 (5.5)	0.0 (13.1)	0.0 (15.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 326
EXTENSIVE BURNS W/ O.R. PROCEDURES
DRG(S): 472

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	35.7 (13.5)	** (")	** (")	** (")	-- (--)	** (")
Northeast	31.5 (19.5)	** (")	** (")	** (")	-- (--)	** (")
North Central	** (")	-- (--)	** (")	** (")	-- (--)	-- (--)
South	** (")	** (")	-- (--)	** (")	-- (--)	** (")
West	** (")	-- (--)	** (")	** (")	-- (--)	-- (--)

INTERNAL MEDICINE

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 12
CEREBROVASCULAR DISORDERS EXCEPT TIA
DRG(S): 14

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	15.6 (1.4)	17.0 (1.2)	20.7 (0.9)	7.3 (1.7)	7.9 (1.8)	11.3 (1.4)
Northeast	17.2 (3.1)	18.5 (2.5)	24.4 (1.7)	4.5 (3.8)	7.8 (3.7)	11.8 (3.0)
North Central	13.2 (2.8)	16.3 (2.4)	18.2 (1.7)	6.0 (3.4)	7.2 (3.5)	11.2 (2.8)
South	15.3 (2.5)	17.5 (2.1)	21.5 (1.5)	10.0 (2.9)	9.8 (3.1)	12.1 (2.5)
West	18.1 (3.4)	14.9 (2.8)	17.0 (2.1)	5.2 (3.9)	5.0 (3.9)	9.0 (3.3)

DRG CLUSTER: 13
TRANSIENT ISCHEMIC ATTACKS
DRG(S): 15

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (2.4)	1.2 (2.0)	1.3 (1.4)	0.0 (2.0)	0.2 (2.0)	0.1 (1.8)
Northeast	0.8 (5.2)	1.3 (4.0)	2.0 (2.8)	0.1 (4.2)	0.0 (4.3)	0.1 (3.6)
North Central	0.2 (4.2)	0.7 (3.7)	1.2 (2.8)	0.0 (3.6)	0.4 (3.7)	0.1 (3.4)
South	0.3 (4.2)	1.2 (3.4)	0.9 (2.4)	0.0 (3.6)	0.0 (3.8)	0.0 (3.1)
West	0.7 (6.2)	1.9 (5.1)	1.3 (3.8)	0.0 (5.0)	0.2 (5.0)	0.3 (4.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 14
NONSPECIFIC CEREBROVASCULAR DISORDERS
DRG(S): 16, 17

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.8 (4.9)	8.8 (5.2)	7.8 (3.6)	0.8 (5.2)	0.0 (7.7)	1.6 (5.7)
Northeast	16.8 (10.0)	6.9 (12.3)	8.7 (7.2)	0.0 (12.6)	0.0 (19.1)	1.7 (11.4)
North Central	8.2 (8.7)	10.0 (9.8)	5.1 (7.3)	0.0 (9.4)	0.0 (13.3)	0.0 (10.8)
South	13.0 (9.1)	10.7 (8.5)	8.3 (6.0)	1.7 (8.5)	0.0 (12.1)	2.1 (9.7)
West	8.2 (12.1)	3.2 (12.8)	9.0 (9.4)	0.0 (14.3)	** (**)	3.3 (16.6)

DRG CLUSTER: 15
CRANIAL & PERIPHERAL NERVE DISORDERS
DRG(S): 18, 19

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.3 (2.9)	1.2 (4.3)	4.0 (4.8)	0.0 (1.9)	0.0 (4.5)	0.0 (5.5)
Northeast	2.5 (6.4)	0.5 (9.3)	4.3 (9.9)	0.0 (4.1)	0.0 (9.8)	0.0 (11.4)
North Central	1.2 (5.2)	1.0 (8.0)	4.2 (8.6)	0.0 (3.6)	0.0 (8.6)	0.0 (10.4)
South	0.4 (5.0)	1.4 (7.6)	4.5 (9.0)	0.0 (3.3)	0.0 (7.4)	0.0 (9.3)
West	2.5 (7.0)	1.9 (10.8)	2.4 (11.1)	0.0 (5.2)	0.0 (12.1)	0.0 (14.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 18
HYPERTENSIVE ENCEPHALOPATHY
DRG(S): 22

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.1 (4.8)	1.2 (6.4)	3.9 (6.2)	0.0 (4.9)	0.0 (8.2)	0.0 (8.5)
Northeast	0.0 (13.8)	2.7 (19.1)	8.6 (17.1)	0.0 (13.5)	** (")	** (")
North Central	1.4 (8.5)	2.6 (12.5)	3.4 (11.4)	0.0 (9.2)	0.0 (15.2)	0.0 (16.3)
South	0.7 (7.5)	0.7 (10.0)	2.6 (9.8)	0.0 (7.4)	0.0 (12.9)	0.0 (13.8)
West	3.2 (12.9)	0.0 (14.0)	6.3 (14.9)	0.0 (13.1)	0.0 (17.7)	0.0 (19.4)

DRG CLUSTER: 19
NONTRAUMATIC STUPOR & COMA
DRG(S): 23

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	16.7 (7.5)	13.2 (10.3)	20.5 (8.3)	1.5 (9.0)	** (")	4.1 (15.0)
Northeast	10.2 (16.0)	** (")	** (")	0.0 (19.7)	** (")	** (")
North Central	15.3 (14.6)	13.4 (19.2)	15.8 (14.9)	0.0 (18.3)	** (")	** (")
South	19.2 (13.5)	14.4 (16.1)	20.1 (15.5)	3.0 (16.6)	** (")	** (")
West	20.9 (16.1)	** (")	16.5 (17.1)	2.1 (17.7)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 20
SEIZURE AND HEADACHE
DRG(S): 24, 25, 26

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	1.4 (1.2)	3.6 (2.5)	5.2 (2.3)	0.0 (0.8)	0.2 (3.2)	0.4 (3.5)
Northeast	1.6 (2.6)	3.7 (5.1)	6.6 (4.7)	0.0 (1.8)	0.3 (6.5)	0.0 (6.9)
North Central	0.8 (2.2)	2.6 (4.8)	4.6 (4.9)	0.0 (1.5)	0.5 (6.1)	0.0 (6.9)
South	1.8 (2.1)	4.3 (4.3)	4.9 (4.1)	0.1 (1.3)	0.0 (5.8)	0.9 (6.3)
West	1.1 (3.1)	3.6 (5.9)	4.8 (5.5)	0.0 (2.2)	0.0 (7.8)	0.4 (8.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 56
PULMONARY EMBOLISM
DRG(S): 78

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.4 (3.0)	10.5 (3.4)	14.1 (3.2)	1.0 (3.3)	2.0 (5.7)	4.2 (6.1)
Northeast	7.2 (6.6)	8.7 (7.5)	15.1 (6.7)	1.9 (7.6)	2.0 (11.9)	9.6 (13.4)
North Central	5.6 (5.7)	7.7 (6.8)	13.8 (5.8)	0.5 (6.4)	3.5 (10.3)	2.5 (12.1)
South	8.2 (5.3)	15.6 (6.1)	13.9 (5.7)	0.6 (6.1)	1.9 (11.1)	5.1 (10.9)
West	3.3 (6.4)	6.6 (7.4)	13.5 (7.4)	1.3 (6.9)	0.1 (13.3)	0.0 (12.9)

DRG CLUSTER: 57
RESP. INFECTIONS & INFLAMMATIONS
DRG(S): 79, 80, 81

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	10.6 (1.6)	16.5 (2.0)	23.4 (1.4)	1.3 (2.9)	4.3 (5.7)	11.1 (3.9)
Northeast	11.7 (3.0)	17.6 (4.6)	25.9 (2.9)	0.7 (6.1)	7.8 (14.2)	16.1 (8.5)
North Central	10.8 (3.4)	15.7 (4.1)	20.8 (2.8)	1.8 (6.2)	4.3 (12.0)	11.7 (8.1)
South	9.7 (2.8)	17.7 (3.3)	24.6 (2.3)	1.4 (4.8)	4.0 (8.6)	9.2 (6.3)
West	10.1 (3.5)	13.8 (4.5)	20.9 (3.1)	1.7 (6.7)	2.3 (13.5)	10.3 (8.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 60
PLEURAL EFFUSION
DRG(S): 85, 86

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.4 (4.0)	7.0 (4.4)	9.4 (3.7)	2.1 (5.9)	0.6 (9.6)	0.0 (9.1)
Northeast	8.8 (8.2)	7.6 (8.7)	14.0 (7.2)	0.0 (12.1)	** (")	0.0 (17.8)
North Central	7.0 (7.7)	9.3 (8.6)	8.1 (7.1)	1.2 (13.0)	2.6 (19.9)	0.0 (19.5)
South	8.6 (7.4)	7.4 (8.3)	9.5 (6.7)	4.1 (9.6)	0.0 (16.9)	0.0 (17.3)
West	3.8 (9.2)	2.4 (10.1)	5.2 (8.5)	0.0 (13.5)	** (")	0.0 (18.6)

DRG CLUSTER: 61
PULMONARY EDEMA & RESPIRATORY FAILURE
DRG(S): 87

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	12.0 (2.4)	16.4 (2.4)	24.3 (2.5)	1.7 (7.0)	9.0 (8.8)	7.6 (7.7)
Northeast	14.8 (5.8)	16.9 (5.4)	24.3 (5.5)	4.2 (17.7)	2.3 (19.7)	1.6 (15.5)
North Central	12.1 (4.6)	15.5 (4.7)	24.5 (4.8)	1.2 (14.2)	** (")	10.1 (14.5)
South	11.7 (3.9)	17.2 (4.0)	25.4 (4.4)	1.1 (10.5)	13.7 (13.0)	7.5 (14.3)
West	9.4 (6.0)	15.3 (6.0)	21.7 (5.8)	2.2 (17.9)	** (")	12.3 (18.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 62
CHRONIC OBSTRUCTIVE PULMONARY DISEASE
DRG(S): 88

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.8 (2.0)	7.6 (1.8)	10.4 (2.0)	0.9 (2.2)	1.8 (2.4)	3.1 (3.0)
Northeast	4.6 (4.2)	7.6 (3.5)	10.6 (3.7)	0.5 (4.5)	0.8 (4.5)	1.3 (5.3)
North Central	4.2 (3.8)	6.3 (3.5)	8.5 (3.9)	0.3 (4.1)	2.2 (4.9)	3.3 (5.9)
South	6.5 (3.7)	8.2 (3.6)	11.5 (4.3)	1.2 (3.8)	1.9 (4.8)	6.1 (6.3)
West	2.1 (5.0)	8.4 (4.1)	11.2 (4.7)	1.5 (5.6)	2.7 (5.4)	1.4 (6.6)

DRG CLUSTER: 63
SIMPLE PNEUMONIA & PLEURISY
DRG(S): 89, 90, 91

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.6 (0.8)	7.8 (1.1)	13.9 (0.8)	0.2 (0.7)	2.0 (2.3)	4.1 (1.8)
Northeast	4.0 (1.8)	7.5 (2.3)	15.7 (1.6)	0.1 (1.8)	1.3 (5.2)	3.5 (3.8)
North Central	3.2 (1.6)	8.3 (2.1)	13.3 (1.5)	0.1 (1.4)	2.4 (4.7)	3.3 (3.4)
South	3.5 (1.4)	7.6 (1.8)	14.4 (1.3)	0.2 (1.1)	2.3 (3.8)	4.5 (3.1)
West	3.8 (1.9)	8.0 (2.4)	11.4 (1.8)	0.1 (1.8)	1.8 (5.2)	5.3 (4.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 64
INTERSTITIAL LUNG DISEASE
DRG(S): 92, 93

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	6.3 (3.9)	12.1 (5.7)	15.2 (4.9)	1.4 (5.0)	2.0 (9.2)	4.2 (9.7)
Northeast	7.0 (8.3)	10.7 (12.5)	23.4 (10.3)	0.8 (10.3)	0.0 (16.5)	4.6 (19.2)
North Central	3.7 (7.4)	11.4 (10.4)	14.7 (9.6)	1.2 (9.7)	0.0 (18.3)	6.5 (19.2)
South	7.3 (6.3)	12.8 (9.6)	12.2 (8.2)	1.6 (8.5)	1.0 (17.1)	0.0 (17.6)
West	7.2 (10.8)	13.5 (14.5)	13.3 (12.0)	2.0 (12.2)	** (")	** (")

DRG CLUSTER: 65
PNEUMOTHORAX
DRG(S): 94, 95

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.7 (2.9)	3.4 (5.2)	9.9 (5.1)	0.0 (2.2)	1.1 (10.7)	0.9 (12.7)
Northeast	1.4 (6.3)	5.7 (12.1)	9.6 (10.7)	0.0 (4.8)	** (")	** (")
North Central	2.3 (5.5)	5.6 (9.8)	13.0 (10.6)	0.0 (4.5)	** (")	** (")
South	1.3 (5.1)	1.7 (8.9)	9.4 (8.5)	0.0 (3.7)	0.0 (16.7)	** (")
West	1.8 (6.4)	2.0 (11.5)	7.3 (11.6)	0.0 (4.9)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 66
BRONCHITIS & ASTHMA
DRG(S): 96, 97, 98

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (0.8)	1.5 (1.1)	3.0 (1.2)	0.0 (0.6)	0.1 (2.1)	0.4 (2.5)
Northeast	0.6 (1.9)	1.3 (2.6)	3.4 (2.6)	0.0 (1.2)	0.3 (4.5)	0.5 (5.2)
North Central	0.3 (1.6)	1.4 (2.3)	2.2 (2.4)	0.0 (1.1)	0.0 (4.4)	0.5 (5.3)
South	0.5 (1.3)	1.8 (1.7)	3.5 (1.9)	0.0 (1.0)	0.2 (3.5)	0.5 (4.1)
West	0.5 (1.9)	1.1 (2.5)	2.0 (2.7)	0.0 (1.4)	0.0 (5.1)	0.2 (5.9)

DRG CLUSTER: 67
RESPIRATORY SIGNS & SYMPTOMS
DRG(S): 99, 100

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.4 (2.0)	4.8 (2.8)	7.0 (2.9)	0.1 (1.5)	0.4 (4.0)	0.9 (5.0)
Northeast	3.3 (4.7)	5.2 (6.2)	6.8 (6.5)	0.3 (4.0)	0.7 (10.3)	1.0 (12.5)
North Central	2.7 (3.7)	6.0 (5.3)	5.8 (5.5)	0.0 (2.8)	0.4 (7.3)	0.6 (9.5)
South	2.1 (3.2)	4.3 (4.7)	7.7 (4.9)	0.2 (2.4)	0.5 (6.7)	1.4 (8.4)
West	1.7 (5.0)	3.6 (6.5)	7.1 (6.6)	0.0 (3.8)	0.0 (9.2)	0.0 (10.8)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 68
OTHER RESPIRATORY SYSTEM DXS
DRG(S): 101, 102

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	6.3 (2.2)	9.5 (3.0)	14.8 (2.9)	0.6 (2.5)	2.7 (6.5)	2.2 (6.1)
Northeast	8.0 (4.9)	12.1 (6.3)	14.3 (6.1)	0.0 (5.8)	0.0 (15.2)	1.4 (14.4)
North Central	5.6 (4.1)	9.2 (5.9)	21.0 (5.7)	0.4 (4.8)	6.0 (12.2)	1.6 (11.5)
South	6.7 (3.7)	7.8 (5.2)	11.5 (5.3)	0.6 (4.1)	1.0 (10.8)	1.5 (10.7)
West	4.8 (5.0)	10.6 (6.6)	13.6 (6.1)	1.6 (6.0)	4.9 (15.1)	5.4 (13.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 133
CIRRHOSIS & ALCOHOLIC HEPATITIS
DRG(S): 202

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	14.5 (2.0)	17.7 (3.9)	23.2 (5.5)	2.8 (6.1)	3.6 (14.1)	** (**)
Northeast	15.7 (4.1)	18.7 (7.6)	25.3 (10.6)	2.6 (12.8)	** (**)	** (**)
North Central	11.8 (4.0)	17.6 (8.2)	24.5 (12.2)	1.9 (12.2)	** (**)	** (**)
South	14.1 (3.7)	14.0 (7.1)	19.1 (9.4)	3.4 (9.8)	** (**)	** (**)
West	17.2 (4.5)	23.5 (8.6)	28.2 (13.3)	2.4 (16.6)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 135
DISORDERS OF PANCREAS EXCEPT MALIGNANCY
DRG(S): 204

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (1.5)	3.0 (3.5)	6.4 (3.3)	0.0 (1.8)	0.0 (4.7)	2.5 (5.1)
Northeast	1.2 (3.2)	3.4 (7.5)	7.2 (7.0)	0.0 (4.0)	0.0 (9.9)	0.0 (11.1)
North Central	1.1 (2.8)	4.9 (6.8)	8.0 (6.4)	0.0 (3.5)	0.0 (9.4)	1.1 (10.1)
South	1.3 (2.6)	2.2 (5.8)	6.0 (5.7)	0.0 (3.0)	0.0 (8.2)	5.0 (8.4)
West	1.4 (3.5)	1.6 (8.8)	3.9 (8.3)	0.0 (4.1)	0.0 (10.5)	0.9 (11.8)

DRG CLUSTER: 136
DISORDERS OF LIVER EXCEPT MALIGNANCY, CIRRHOSIS, ALCOHOLIC HEPATITIS
DRG(S): 205, 206

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	14.3 (2.0)	22.9 (3.4)	24.9 (4.3)	0.5 (2.3)	3.1 (7.0)	6.0 (9.4)
Northeast	18.3 (4.2)	28.8 (6.7)	29.4 (8.2)	0.0 (5.2)	1.5 (14.3)	* (*)
North Central	12.2 (3.9)	22.2 (7.1)	28.5 (9.4)	0.4 (4.5)	10.3 (13.3)	7.9 (18.2)
South	13.8 (3.6)	21.1 (6.2)	25.7 (7.4)	1.0 (3.8)	0.0 (11.9)	5.4 (16.0)
West	13.2 (4.3)	19.6 (7.0)	11.3 (10.0)	0.1 (5.9)	0.0 (18.5)	* (*)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 137
DISORDERS OF BILIARY TRACT
DRG(S): 207, 208

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	1.1 (2.4)	3.1 (3.0)	5.3 (2.3)	0.1 (1.8)	0.4 (3.7)	0.2 (3.7)
Northeast	0.9 (5.0)	6.6 (6.2)	6.0 (4.7)	0.0 (3.7)	0.3 (7.8)	0.6 (7.4)
North Central	1.2 (4.6)	3.6 (6.1)	5.5 (4.5)	0.1 (3.4)	0.0 (7.4)	0.3 (7.3)
South	1.2 (4.2)	1.5 (5.0)	5.1 (4.0)	0.1 (3.1)	0.8 (6.6)	0.0 (6.6)
West	1.1 (5.8)	1.8 (7.1)	4.4 (6.1)	0.0 (4.3)	0.5 (8.3)	0.0 (9.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 181
SKIN ULCERS
DRG(S): 271

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.7 (4.5)	6.9 (5.6)	11.9 (3.6)	0.4 (7.9)	3.5 (11.1)	0.0 (7.5)
Northeast	3.3 (8.9)	6.7 (10.3)	14.4 (7.1)	0.0 (15.3)	** (")	0.0 (14.0)
North Central	1.2 (7.2)	2.8 (10.2)	6.1 (7.2)	1.5 (14.7)	0.0 (19.7)	0.0 (13.7)
South	4.2 (9.0)	10.4 (11.1)	13.7 (6.0)	0.0 (13.8)	** (")	0.0 (14.2)
West	2.2 (13.0)	8.4 (14.8)	12.2 (10.3)	** (")	** (")	** (")

DRG CLUSTER: 182
MAJOR SKIN DISORDERS
DRG(S): 272, 273

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.8 (4.5)	6.4 (6.6)	3.5 (5.8)	1.5 (3.9)	0.0 (7.9)	2.3 (8.1)
Northeast	7.5 (10.5)	7.6 (14.9)	7.1 (11.9)	2.8 (9.0)	0.0 (17.1)	** (")
North Central	5.6 (7.3)	8.6 (11.4)	1.6 (10.9)	0.3 (6.6)	0.0 (12.8)	0.0 (13.7)
South	2.3 (8.5)	5.8 (10.9)	2.9 (9.9)	2.5 (7.0)	0.0 (15.2)	5.0 (14.3)
West	5.0 (10.7)	0.0 (20.0)	2.8 (15.6)	0.0 (10.5)	** (")	2.7 (19.2)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 184
NON-MALIGNANT BREAST DISORDERS
DRG(S): 276

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (10.6)	** (**)	** (**)	0.0 (5.3)	** (**)	** (**)
Northeast	0.0 (19.9)	** (**)	** (**)	0.0 (10.0)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	0.0 (11.6)	** (**)	** (**)
South	0.0 (16.5)	** (**)	** (**)	0.0 (8.9)	** (**)	** (**)
West	** (**)	** (**)	** (**)	0.0 (13.9)	** (**)	** (**)

DRG CLUSTER: 185
CELLULITIS
DRG(S): 277, 278, 279

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.6 (1.4)	2.0 (2.4)	3.2 (2.1)	0.0 (1.1)	0.0 (3.2)	0.2 (2.9)
Northeast	0.8 (2.6)	1.8 (4.5)	4.3 (3.8)	0.0 (2.2)	0.0 (5.8)	0.0 (5.2)
North Central	0.5 (2.6)	2.4 (4.7)	2.8 (4.1)	0.0 (2.2)	0.0 (6.5)	0.2 (5.8)
South	0.6 (2.6)	1.9 (4.3)	3.1 (3.8)	0.0 (2.1)	0.0 (5.9)	0.4 (5.5)
West	0.5 (3.2)	2.2 (5.9)	1.7 (5.2)	0.0 (2.6)	0.0 (7.9)	0.0 (7.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 186
TRAUMA TO SKIN, SUBCUT. TISS. & BREAST
DRG(S): 280, 281, 282

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (2.1)	0.6 (5.3)	3.7 (3.6)	0.1 (1.3)	0.0 (5.7)	0.1 (3.9)
Northeast	0.3 (4.9)	1.1 (10.9)	4.8 (6.9)	0.0 (3.1)	0.0 (12.7)	0.0 (8.0)
North Central	0.1 (4.1)	0.6 (9.7)	3.4 (7.0)	0.1 (2.7)	0.0 (10.9)	0.0 (7.4)
South	0.1 (3.6)	0.0 (9.6)	4.0 (6.6)	0.1 (2.2)	0.0 (9.5)	0.2 (7.2)
West	0.4 (4.7)	1.3 (13.2)	1.9 (8.2)	0.1 (3.2)	0.0 (14.8)	0.0 (9.2)

DRG CLUSTER: 187
MINOR SKIN DISORDERS
DRG(S): 283, 284

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.9 (3.5)	3.4 (6.7)	6.7 (6.3)	0.0 (2.8)	0.4 (8.4)	0.4 (8.7)
Northeast	5.8 (7.1)	3.5 (13.6)	7.9 (13.3)	0.0 (6.2)	0.0 (17.7)	* (*)
North Central	1.6 (6.4)	2.4 (12.3)	4.5 (12.2)	0.0 (5.2)	1.5 (15.2)	0.0 (16.1)
South	1.2 (6.2)	3.0 (11.2)	7.7 (10.7)	0.0 (4.6)	0.0 (15.2)	1.0 (14.2)
West	5.1 (9.5)	6.4 (19.7)	5.7 (16.1)	0.0 (7.7)	* (*)	* (*)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 196
DIABETES
DRG(S): 294, 295

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.1 (1.1)	3.1 (1.9)	7.5 (1.9)	0.0 (1.1)	0.3 (2.7)	0.8 (3.4)
Northeast	1.0 (2.5)	3.0 (4.0)	9.5 (3.9)	0.0 (2.6)	0.0 (6.1)	0.8 (7.2)
North Central	1.0 (1.9)	2.4 (3.6)	6.9 (3.7)	0.1 (2.1)	0.0 (4.9)	0.4 (5.9)
South	1.3 (1.9)	3.8 (3.1)	7.0 (3.3)	0.0 (1.8)	0.7 (4.4)	1.2 (6.0)
West	1.0 (2.8)	1.8 (5.2)	6.7 (5.0)	0.0 (2.9)	0.0 (7.7)	0.5 (8.7)

DRG CLUSTER: 197
NUTRITIONAL & MISC. METABOLIC DISORDERS
DRG(S): 296, 297, 298

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.8 (1.1)	8.9 (1.3)	10.5 (1.0)	0.3 (1.2)	1.1 (3.0)	2.4 (2.1)
Northeast	7.1 (2.5)	13.0 (3.0)	15.9 (2.0)	0.3 (2.7)	0.3 (6.6)	1.8 (4.4)
North Central	5.0 (2.0)	8.4 (2.5)	9.3 (1.8)	0.3 (2.3)	1.3 (6.0)	1.4 (4.0)
South	3.7 (1.9)	8.0 (2.3)	9.9 (1.6)	0.3 (2.0)	1.3 (4.9)	3.7 (3.6)
West	4.0 (2.7)	7.5 (3.2)	6.4 (2.4)	0.2 (3.3)	0.7 (7.8)	1.0 (5.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 198
INBORN ERRORS OF METABOLISM
DRG(S): 299

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.4 (7.7)	** (**)	** (**)	0.2 (6.1)	** (**)	** (**)
Northeast	** (**)	** (**)	** (**)	0.0 (14.2)	** (**)	-- (--)
North Central	2.2 (13.5)	** (**)	** (**)	0.0 (10.2)	** (**)	** (**)
South	5.9 (13.4)	** (**)	** (**)	0.6 (10.3)	** (**)	** (**)
West	2.3 (17.2)	** (**)	** (**)	0.0 (18.5)	** (**)	** (**)

DRG CLUSTER: 199
ENDOCRINE DISORDERS
DRG(S): 300, 301

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.5 (3.4)	6.3 (5.0)	4.7 (4.4)	0.0 (3.3)	1.5 (8.8)	1.1 (9.2)
Northeast	2.9 (7.9)	8.2 (10.3)	8.7 (10.0)	0.0 (7.7)	1.9 (17.0)	0.0 (18.5)
North Central	2.2 (6.3)	2.7 (9.3)	5.7 (8.3)	0.0 (6.1)	1.8 (16.6)	0.0 (19.7)
South	2.7 (6.0)	5.5 (8.9)	3.6 (8.1)	0.0 (5.2)	1.9 (18.3)	2.5 (15.2)
West	2.1 (7.7)	10.8 (12.4)	1.4 (9.7)	0.0 (9.2)	0.0 (18.5)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 208
RENAL FAILURE
DRG(S): 316

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.4 (2.7)	18.6 (3.3)	33.9 (2.4)	2.8 (5.6)	8.8 (9.3)	23.6 (8.1)
Northeast	10.9 (6.0)	20.7 (7.0)	37.3 (5.1)	1.5 (14.2)	4.7 (18.7)	** (**)
North Central	11.8 (5.5)	17.3 (6.2)	31.1 (4.4)	3.4 (12.0)	11.0 (16.8)	28.2 (14.9)
South	11.9 (4.3)	18.8 (5.8)	37.2 (4.1)	3.5 (7.9)	10.2 (17.1)	24.7 (13.3)
West	10.1 (7.1)	17.3 (8.0)	25.2 (5.9)	0.0 (15.0)	** (**)	17.7 (19.5)

DRG CLUSTER: 209
ADMIT FOR RENAL DIALYSIS
DRG(S): 317

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.6 (10.1)	11.2 (16.8)	** (**)	0.0 (19.1)	** (**)	** (**)
Northeast	0.0 (17.7)	** (**)	** (**)	** (**)	** (**)	** (**)
North Central	2.2 (20.0)	** (**)	** (**)	** (**)	-- (--)	-- (--)
South	0.0 (17.9)	** (**)	** (**)	** (**)	** (**)	** (**)
West	** (**)	** (**)	** (**)	** (**)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 225
BENIGN PROSTATIC HYPERTROPHY
DRG(S): 348, 349

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (7.3)	1.4 (5.6)	3.5 (5.4)	0.0 (8.2)	2.4 (8.4)	0.0 (10.7)
Northeast	2.9 (13.2)	0.0 (9.8)	2.0 (10.0)	0.0 (15.3)	0.0 (13.1)	0.0 (17.6)
North Central	0.0 (14.9)	0.8 (11.6)	2.2 (10.7)	0.0 (16.3)	0.0 (19.9)	** (**)
South	0.0 (13.4)	3.6 (9.8)	6.5 (9.6)	0.0 (13.9)	7.7 (16.0)	0.0 (19.1)
West	0.0 (18.7)	0.0 (16.3)	0.0 (14.6)	** (**)	** (**)	** (**)

DRG CLUSTER: 226
INFLAMMATION OF MALE REPRO. SYSTEM
DRG(S): 350

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (3.5)	1.6 (6.4)	1.4 (6.7)	0.0 (2.8)	0.0 (8.7)	0.0 (11.4)
Northeast	0.0 (7.5)	2.2 (13.3)	1.3 (14.2)	0.0 (5.9)	0.0 (16.6)	** (**)
North Central	0.3 (7.0)	0.0 (12.3)	1.9 (13.1)	0.0 (5.6)	0.0 (16.7)	** (**)
South	0.2 (5.8)	2.7 (10.6)	1.7 (11.6)	0.0 (4.6)	0.0 (15.2)	0.0 (19.5)
West	0.0 (8.9)	0.0 (16.9)	0.0 (16.3)	0.0 (6.9)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 228
OTHER MALE REPRO. SYSTEM DXS
DRG(S): 352

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (11.3)	** (")	** (")	0.0 (5.7)	** (")	** (")
Northeast	** (")	** (")	** (")	0.0 (10.2)	** (")	** (")
North Central	0.0 (18.9)	** (")	** (")	0.0 (11.6)	** (")	** (")
South	** (")	** (")	** (")	0.0 (9.8)	** (")	** (")
West	** (")	** (")	** (")	0.0 (16.9)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 266
RED BLOOD CELL DISORDERS
DRG(S): 395, 396

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.7 (1.6)	4.5 (2.4)	4.3 (1.9)	0.2 (1.5)	1.1 (4.6)	1.0 (3.4)
Northeast	3.6 (3.2)	5.4 (4.4)	4.9 (3.5)	0.0 (3.7)	0.0 (8.9)	0.0 (6.1)
North Central	2.5 (3.0)	4.8 (4.8)	4.9 (3.7)	0.2 (2.4)	0.0 (9.1)	0.6 (7.1)
South	2.4 (2.8)	4.6 (4.3)	4.0 (3.4)	0.2 (2.7)	2.8 (8.0)	1.4 (5.7)
West	1.8 (4.5)	1.9 (6.4)	3.2 (4.9)	0.3 (4.4)	0.0 (12.8)	3.4 (9.7)

DRG CLUSTER: 267
COAGULATION DISORDERS
DRG(S): 397

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.4 (3.7)	10.6 (5.7)	13.2 (5.5)	0.0 (3.4)	0.0 (9.6)	3.0 (10.4)
Northeast	7.2 (7.5)	7.3 (12.0)	18.2 (10.8)	0.0 (6.9)	** (**)	0.0 (18.9)
North Central	7.3 (7.0)	13.0 (10.2)	8.1 (10.5)	0.0 (6.4)	0.0 (17.7)	8.6 (19.5)
South	4.8 (7.0)	12.4 (10.4)	14.5 (9.9)	0.0 (6.6)	0.0 (17.3)	2.1 (20.0)
West	1.6 (8.7)	7.7 (13.7)	10.5 (13.4)	0.0 (7.8)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 268
RETICULOENDOTHELIAL & IMMUNITY DISORDERS
DRG(S): 398, 399

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	3.2 (2.5)	6.7 (4.3)	6.8 (4.7)	1.1 (2.9)	0.5 (9.4)	2.9 (9.8)
Northeast	4.4 (5.2)	6.1 (8.8)	9.7 (9.0)	0.5 (6.1)	0.0 (19.2)	4.3 (18.2)
North Central	2.5 (5.1)	6.8 (8.2)	7.3 (9.4)	0.2 (6.1)	0.0 (17.3)	** (")
South	3.3 (4.1)	5.2 (7.8)	2.6 (8.9)	2.1 (4.6)	0.0 (16.2)	1.7 (17.4)
West	2.1 (6.6)	10.4 (10.3)	9.6 (10.9)	0.0 (7.6)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 281
SEPTICEMIA
DRG(S): 416, 417

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	12.3 (1.6)	19.3 (2.0)	25.6 (1.4)	1.1 (2.6)	5.4 (7.5)	12.2 (5.7)
Northeast	14.8 (3.4)	21.6 (4.2)	30.4 (3.0)	0.5 (6.2)	7.8 (16.8)	16.3 (13.0)
North Central	10.9 (3.0)	21.0 (3.8)	23.4 (2.6)	0.9 (5.3)	4.8 (14.4)	8.9 (11.0)
South	12.1 (3.0)	18.3 (3.4)	25.9 (2.4)	1.8 (4.2)	6.3 (12.9)	13.3 (9.5)
West	11.8 (3.7)	16.6 (4.5)	22.3 (3.4)	0.0 (6.2)	1.9 (17.2)	11.4 (13.2)

DRG CLUSTER: 282
POSTOPERATIVE & POST-TRAUMA INFECTIONS
DRG(S): 418

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.7 (3.5)	2.2 (5.7)	8.9 (6.8)	0.1 (2.5)	0.0 (6.3)	1.1 (7.7)
Northeast	1.7 (7.9)	3.0 (12.7)	10.1 (13.5)	0.0 (5.7)	0.0 (13.9)	0.0 (16.5)
North Central	0.4 (6.4)	0.9 (11.0)	9.1 (13.8)	0.0 (4.9)	0.0 (11.4)	0.0 (13.9)
South	0.5 (6.6)	2.9 (10.5)	11.0 (12.1)	0.2 (4.4)	0.0 (12.3)	1.3 (14.9)
West	0.5 (7.8)	1.8 (11.5)	3.4 (15.6)	0.0 (5.4)	0.0 (13.6)	3.6 (16.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 283
FEVER OF UNKNOWN ORIGIN, AGES 18+
DRG(S): 419, 420

Region	With CCs			Without CCs		
	<65	Age 65-74	75+	<65	Age 65-74	75+
U.S.	1.6 (2.9)	2.6 (4.2)	4.7 (3.9)	0.0 (3.7)	0.3 (7.2)	0.5 (6.8)
Northeast	3.0 (6.1)	3.8 (8.5)	6.3 (7.7)	0.0 (7.9)	0.0 (13.8)	1.4 (13.9)
North Central	1.5 (6.0)	2.1 (9.3)	2.5 (8.6)	0.0 (7.9)	0.0 (16.8)	0.0 (14.7)
South	0.6 (5.1)	2.7 (6.8)	4.4 (6.6)	0.0 (5.9)	0.4 (12.2)	0.7 (11.7)
West	1.8 (6.2)	1.3 (9.7)	5.5 (9.1)	0.0 (8.8)	0.6 (16.6)	0.0 (14.7)

DRG CLUSTER: 284
VIRAL ILLNESS, AGE > 17
DRG(S): 421

Region	With CCs			Without CCs		
	<65	Age 65-74	75+	<65	Age 65-74	75+
U.S.	0.8 (2.4)	2.8 (5.5)	1.9 (4.7)	0.0 (2.4)	0.0 (8.0)	0.4 (7.8)
Northeast	1.0 (5.4)	3.3 (10.6)	2.0 (10.7)	0.0 (5.2)	0.0 (15.1)	1.5 (15.1)
North Central	0.4 (5.1)	0.0 (13.0)	2.0 (9.8)	0.0 (4.8)	0.0 (17.0)	0.0 (16.3)
South	0.7 (4.0)	2.8 (9.6)	1.4 (8.4)	0.0 (3.8)	0.0 (14.6)	0.0 (14.4)
West	1.2 (5.6)	5.1 (11.9)	2.4 (9.5)	0.0 (5.9)	0.0 (17.8)	0.0 (17.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 285
VIRAL ILLNESS & FEVER OF UNKNOWN ORIGIN, AGE<18
DRG(S): 422

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (2.2)	-- (--)	-- (--)	0.0 (1.5)	-- (--)	-- (--)
Northeast	0.0 (5.0)	-- (--)	-- (--)	0.0 (3.1)	-- (--)	-- (--)
North Central	0.1 (4.0)	-- (--)	-- (--)	0.0 (3.0)	-- (--)	-- (--)
South	0.3 (3.4)	-- (--)	-- (--)	0.0 (2.4)	-- (--)	-- (--)
West	0.0 (5.8)	-- (--)	-- (--)	0.0 (3.7)	-- (--)	-- (--)

DRG CLUSTER: 286
OTHER INFECTIONS & PARASITIC DISEASE DXS
DRG(S): 423

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	9.3 (3.3)	10.5 (7.3)	14.5 (7.4)	0.1 (3.7)	0.0 (14.9)	0.0 (19.5)
Northeast	13.8 (5.9)	15.8 (17.1)	34.1 (16.1)	0.0 (7.1)	** (")	** (")
North Central	5.7 (7.8)	9.1 (14.5)	14.3 (15.9)	0.0 (8.4)	** (")	** (")
South	5.0 (6.0)	6.5 (12.2)	9.7 (11.4)	0.2 (6.1)	** (")	** (")
West	11.4 (6.9)	17.4 (16.2)	6.8 (18.5)	0.0 (9.3)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 306
MULTIPLE TRAUMA
DRG(S): 444, 445, 446

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (3.3)	0.8 (9.7)	3.7 (7.7)	0.0 (2.1)	0.0 (9.7)	0.6 (9.1)
Northeast	0.8 (7.0)	** (**)	7.3 (14.7)	0.0 (4.2)	** (**)	0.0 (17.8)
North Central	0.5 (6.7)	** (**)	5.2 (15.0)	0.0 (4.2)	0.0 (17.1)	** (**)
South	0.1 (5.6)	0.0 (14.3)	2.1 (13.9)	0.1 (3.5)	0.0 (17.7)	0.0 (16.4)
West	0.5 (7.2)	** (**)	0.0 (19.7)	0.0 (4.8)	** (**)	0.0 (18.6)

DRG CLUSTER: 307
ALLERGIC REACTIONS
DRG(S): 447, 448

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (6.9)	0.9 (11.7)	1.2 (14.7)	0.0 (3.9)	0.0 (12.5)	0.0 (14.7)
Northeast	0.0 (15.1)	** (**)	** (**)	0.0 (8.9)	** (**)	** (**)
North Central	0.0 (13.6)	2.5 (19.9)	** (**)	0.0 (7.2)	** (**)	** (**)
South	3.8 (11.6)	0.0 (18.3)	** (**)	0.0 (6.7)	** (**)	** (**)
West	0.0 (16.5)	** (**)	** (**)	0.0 (9.9)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 308
POISONING & TOXIC EFFECTS OF DRUGS
DRG(S): 449, 450, 451

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (1.3)	3.1 (3.4)	3.1 (2.9)	0.1 (1.0)	0.0 (5.4)	0.4 (5.4)
Northeast	1.8 (2.9)	4.6 (7.3)	4.1 (6.2)	0.1 (2.3)	0.0 (11.1)	1.7 (10.7)
North Central	1.4 (2.4)	1.9 (6.6)	2.9 (5.9)	0.1 (1.9)	0.0 (10.4)	0.0 (10.6)
South	1.0 (2.4)	3.2 (5.8)	3.2 (5.2)	0.1 (1.7)	0.0 (10.0)	0.0 (9.5)
West	1.7 (2.9)	3.0 (7.5)	2.1 (6.7)	0.0 (2.3)	0.0 (12.7)	0.0 (13.3)

DRG CLUSTER: 309
COMPLICATIONS OF TREATMENT
DRG(S): 452, 453

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (2.1)	2.6 (3.3)	4.2 (3.6)	0.0 (2.0)	0.0 (4.4)	0.0 (4.8)
Northeast	2.8 (4.6)	2.1 (7.1)	6.5 (7.4)	0.0 (4.4)	0.0 (9.0)	0.0 (9.9)
North Central	2.7 (3.9)	3.1 (6.5)	5.4 (6.9)	0.0 (3.8)	0.0 (8.1)	0.0 (8.6)
South	1.0 (3.8)	2.3 (6.3)	2.4 (6.6)	0.0 (3.7)	0.0 (8.2)	0.0 (9.2)
West	1.6 (4.7)	3.2 (6.6)	3.4 (7.8)	0.0 (4.6)	0.0 (10.0)	0.0 (11.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 310
OTHER INJURIES, POISONINGS & TOXIC EFF. DXS
DRG(S): 454, 455

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.5 (4.0)	5.9 (8.0)	11.0 (6.5)	0.7 (2.9)	1.0 (13.3)	2.5 (10.4)
Northeast	7.5 (9.6)	3.9 (16.8)	17.7 (13.8)	0.0 (6.5)	** (")	** (")
North Central	4.6 (8.2)	6.8 (16.9)	7.7 (12.9)	0.0 (6.3)	** (")	2.3 (18.9)
South	3.9 (6.9)	3.4 (13.6)	12.2 (10.8)	1.2 (5.0)	** (")	1.5 (18.6)
West	2.9 (8.1)	14.4 (18.1)	3.7 (15.8)	1.0 (6.0)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 317
REHABILITATION
DRG(S): 462

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (2.4)	1.5 (2.6)	2.1 (2.2)	0.0 (3.7)	0.2 (3.9)	0.2 (3.4)
Northeast	0.0 (6.8)	0.4 (7.2)	1.1 (6.1)	0.0 (8.4)	0.0 (9.9)	0.0 (9.7)
North Central	0.3 (3.6)	1.6 (4.3)	4.1 (3.9)	0.0 (7.0)	0.3 (7.2)	0.8 (6.2)
South	0.5 (5.6)	2.3 (5.3)	1.4 (4.3)	0.0 (8.4)	0.0 (8.7)	0.0 (7.4)
West	1.1 (4.5)	0.9 (5.0)	0.9 (4.2)	0.0 (6.5)	0.3 (6.6)	0.0 (5.7)

DRG CLUSTER: 318
SIGNS & SYMPTOMS
DRG(S): 463, 464

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.7 (4.1)	5.3 (5.6)	6.2 (4.7)	0.2 (4.2)	0.0 (7.8)	1.6 (7.7)
Northeast	6.8 (8.7)	6.8 (12.0)	6.9 (10.9)	0.0 (9.8)	0.0 (17.0)	1.7 (17.2)
North Central	3.3 (7.7)	6.9 (11.5)	7.2 (8.7)	0.0 (7.9)	0.0 (14.4)	1.6 (13.8)
South	2.5 (6.8)	3.5 (9.2)	6.4 (8.2)	0.5 (6.7)	0.0 (13.5)	1.2 (14.5)
West	3.6 (10.9)	5.3 (13.6)	3.2 (11.2)	0.0 (11.0)	0.0 (18.7)	2.1 (17.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 319
AFTERCARE W/ HIST. OF MALIGNANCY AS SECONDARY DX
DRG(S): 465

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	12.8 (18.3)	28.3 (18.9)	16.6 (14.8)	1.2 (13.5)	0.0 (17.3)	** (**)
Northeast	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
South	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
West	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)

DRG CLUSTER: 320
AFTERCARE W/O HIST. OF MALIGNANCY AS SECONDARY DX
DRG(S): 466

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.7 (4.9)	16.2 (8.1)	20.1 (6.1)	0.0 (3.5)	0.8 (8.6)	1.0 (10.0)
Northeast	1.0 (12.5)	** (**)	** (**)	0.0 (7.7)	0.0 (18.3)	** (**)
North Central	1.9 (12.2)	10.0 (16.1)	7.8 (10.8)	0.0 (11.2)	2.2 (19.4)	** (**)
South	2.4 (7.5)	25.4 (14.5)	27.9 (8.8)	0.0 (5.7)	0.0 (14.7)	0.0 (15.4)
West	5.4 (10.0)	14.1 (15.5)	16.3 (16.4)	0.0 (6.2)	2.1 (17.4)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 327
RESPIRATORY SYS DX W/TRACHEOSTOMY
DRG(S): 474

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	37.9 (4.1)	54.6 (4.8)	72.7 (4.8)	7.5 (14.2)	** (")	** (")
Northeast	46.3 (8.4)	66.0 (8.6)	84.1 (7.9)	** (")	** (")	** (")
North Central	32.4 (7.9)	45.2 (9.8)	65.2 (10.0)	** (")	** (")	** (")
South	31.3 (7.9)	54.9 (9.1)	69.0 (9.5)	** (")	** (")	** (")
West	44.5 (9.1)	46.9 (11.6)	59.4 (11.7)	** (")	** (")	** (")

DRG CLUSTER: 328
RESPIRATORY SYS DX W/VENTILATOR SUPPORT
DRG(S): 475

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	31.5 (2.7)	36.9 (2.9)	53.7 (2.7)	11.8 (9.7)	26.8 (19.5)	38.1 (17.8)
Northeast	36.0 (5.2)	36.5 (5.6)	57.9 (4.6)	** (")	** (")	** (")
North Central	29.6 (5.4)	39.9 (5.7)	52.1 (5.6)	** (")	** (")	** (")
South	30.4 (5.1)	36.6 (5.6)	48.5 (5.6)	18.8 (18.1)	** (")	** (")
West	28.7 (5.7)	34.5 (6.1)	54.9 (5.8)	7.0 (16.7)	** (")	** (")

ONCOLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 9
NERVOUS SYSTEM NEOPLASMS
DRG(S): 10, 11

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	24.0 (2.4)	26.0 (3.3)	24.9 (4.2)	9.4 (3.5)	15.7 (6.8)	11.6 (8.3)
Northeast	30.6 (4.8)	32.5 (6.6)	32.7 (7.4)	7.1 (7.6)	15.7 (14.7)	3.8 (15.6)
North Central	22.7 (4.4)	18.5 (6.1)	23.0 (8.5)	10.5 (6.5)	8.1 (12.2)	7.9 (15.1)
South	20.0 (4.6)	30.5 (6.0)	24.6 (7.9)	10.1 (6.1)	24.7 (13.4)	19.6 (15.2)
West	23.1 (5.8)	19.6 (8.2)	13.1 (10.0)	8.7 (9.2)	8.8 (15.1)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 46
EAR, NOSE & THROAT MALIGNANCY
DRG(S): 64

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	21.1 (5.1)	24.1 (7.1)	24.2 (8.3)	6.3 (6.8)	17.6 (11.3)	7.2 (13.4)
Northeast	23.9 (10.3)	25.2 (13.0)	22.7 (13.5)	5.7 (13.1)	** (")	** (")
North Central	16.7 (8.5)	23.7 (13.5)	** (")	5.8 (11.3)	** (")	** (")
South	17.0 (10.0)	22.4 (12.8)	18.1 (14.5)	9.3 (13.4)	** (")	** (")
West	32.6 (13.0)	** (")	** (")	** (")	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 58
RESPIRATORY NEOPLASMS
DRG(S): 82

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	31.3 (1.5)	31.9 (1.6)	32.9 (1.9)	17.0 (3.4)	20.4 (4.4)	22.4 (5.4)
Northeast	30.0 (3.1)	33.0 (3.3)	34.6 (3.6)	10.3 (7.1)	15.2 (8.5)	15.5 (10.9)
North Central	30.0 (2.7)	28.7 (3.2)	30.6 (3.9)	15.5 (6.4)	20.9 (8.2)	23.4 (9.7)
South	34.1 (2.6)	34.5 (2.9)	33.9 (3.5)	23.3 (5.7)	22.9 (7.7)	29.0 (10.0)
West	28.9 (3.6)	28.5 (4.2)	31.1 (4.7)	11.5 (8.9)	21.3 (11.6)	15.8 (13.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 115
DIGESTIVE MALIGNANCY
DRG(S): 172, 173

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	32.3 (2.6)	30.0 (2.8)	30.6 (2.6)	11.4 (5.1)	12.5 (6.8)	17.3 (6.1)
Northeast	30.6 (5.4)	30.3 (5.2)	35.4 (4.9)	6.7 (10.3)	10.5 (14.4)	12.6 (11.8)
North Central	30.9 (4.7)	32.4 (5.5)	30.2 (5.1)	10.1 (9.5)	13.4 (13.3)	9.2 (12.4)
South	36.0 (4.6)	29.4 (5.3)	29.3 (4.7)	14.9 (8.7)	14.8 (11.1)	26.6 (10.7)
West	28.3 (6.4)	26.7 (7.2)	26.2 (6.6)	12.5 (14.8)	5.1 (18.7)	8.6 (15.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 134
MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS
DRG(S): 203

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	39.3 (2.7)	40.5 (2.9)	40.3 (2.9)	18.4 (4.9)	29.8 (6.2)	22.4 (6.2)
Northeast	41.2 (5.5)	46.4 (5.4)	44.7 (5.4)	21.3 (10.7)	19.1 (11.7)	20.9 (12.0)
North Central	35.4 (4.9)	33.2 (5.8)	39.8 (5.9)	20.4 (9.7)	29.8 (11.7)	16.2 (11.7)
South	40.8 (5.1)	41.9 (5.6)	39.2 (5.1)	17.1 (8.3)	39.6 (11.8)	31.0 (12.9)
West	39.9 (6.1)	38.4 (6.9)	35.0 (7.3)	15.9 (11.2)	24.1 (15.3)	20.6 (13.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 183
MALIGNANT BREAST DISORDERS
DRG(S): 274, 275

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	30.1 (4.5)	33.3 (6.9)	27.5 (7.7)	17.0 (10.0)	18.9 (17.4)	** (**)
Northeast	28.3 (9.8)	35.7 (13.6)	34.4 (13.8)	** (**)	** (**)	** (**)
North Central	27.8 (8.0)	42.6 (12.4)	27.3 (14.7)	** (**)	** (**)	** (**)
South	28.0 (7.8)	27.5 (12.7)	23.0 (14.2)	18.2 (15.2)	** (**)	** (**)
West	44.8 (12.4)	23.5 (18.2)	** (**)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 210
KIDNEY & URINARY TRACT NEOPLASMS
DRG(S): 318, 319

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	23.8 (5.3)	23.2 (5.9)	29.7 (5.2)	9.7 (7.6)	9.4 (10.6)	12.9 (11.3)
Northeast	17.0 (12.1)	31.0 (11.8)	32.4 (10.3)	10.6 (16.7)	** (")	** (")
North Central	20.4 (9.9)	20.4 (12.2)	28.4 (9.6)	4.8 (15.5)	10.4 (18.7)	** (")
South	30.8 (9.3)	22.9 (10.2)	34.9 (9.7)	12.7 (12.0)	17.7 (19.1)	** (")
West	20.8 (12.4)	17.1 (13.6)	17.5 (12.6)	6.2 (19.5)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 224
MALIGNANCY, MALE REPRO. SYSTEM
DRG(S): 346, 347

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	25.6 (7.2)	22.1 (5.0)	22.2 (4.1)	3.8 (9.8)	7.5 (9.8)	15.5 (10.2)
Northeast	24.8 (17.8)	21.1 (10.5)	23.5 (8.5)	** (**)	1.8 (16.4)	2.4 (19.5)
North Central	31.7 (14.1)	21.5 (9.7)	19.7 (7.6)	2.6 (19.2)	** (**)	** (**)
South	17.8 (11.3)	25.7 (8.5)	28.4 (7.2)	5.2 (14.6)	11.6 (15.9)	25.7 (16.4)
West	36.7 (17.7)	15.4 (12.4)	8.7 (10.6)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 240
MALIGNANCY, FEMALE REPRO. SYSTEM
DRG(S): 366, 367

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	26.4 (4.5)	34.0 (6.4)	40.6 (6.4)	9.8 (5.7)	9.1 (12.1)	18.2 (14.4)
Northeast	28.9 (10.6)	54.8 (14.8)	40.2 (11.6)	12.8 (16.1)	** (**)	** (**)
North Central	22.3 (8.5)	31.4 (11.2)	34.3 (12.4)	10.7 (13.3)	** (**)	** (**)
South	27.8 (7.5)	24.6 (10.7)	46.4 (11.9)	10.0 (7.4)	6.1 (19.2)	** (**)
West	26.7 (11.5)	42.2 (18.2)	36.1 (16.6)	2.5 (18.6)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 271
LYMPHOMA & NON-ACUTE LEUKEMIA
DRG(S): 403, 404

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	22.7 (2.5)	24.8 (3.0)	26.6 (3.0)	5.8 (3.2)	6.7 (5.7)	13.6 (5.9)
Northeast	27.0 (5.2)	25.8 (5.7)	29.6 (5.7)	5.7 (7.3)	4.3 (10.2)	7.4 (11.4)
North Central	20.8 (4.5)	24.3 (5.7)	22.8 (6.0)	9.0 (5.8)	4.9 (12.0)	14.1 (11.2)
South	19.7 (4.6)	22.2 (5.6)	25.3 (5.5)	2.9 (5.6)	9.4 (10.1)	19.1 (10.8)
West	25.7 (5.8)	28.6 (7.3)	30.2 (7.1)	7.8 (8.1)	7.5 (14.5)	10.9 (15.3)

DRG CLUSTER: 272
ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURES
DRG(S): 405, 473

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	23.7 (3.5)	42.7 (5.9)	47.5 (5.8)	4.3 (4.8)	19.2 (15.5)	30.7 (11.3)
Northeast	29.7 (8.2)	51.4 (12.3)	50.1 (11.9)	7.0 (13.2)	** (")	** (")
North Central	21.3 (6.3)	42.4 (10.6)	43.2 (11.2)	5.7 (10.2)	** (")	** (")
South	19.5 (6.1)	42.6 (12.2)	49.1 (10.6)	2.9 (6.9)	** (")	** (")
West	30.0 (8.2)	34.6 (12.7)	47.2 (13.6)	5.3 (12.0)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 275
RADIOTHERAPY
DRG(S): 409

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.1 (4.3)	9.8 (5.0)	10.4 (6.2)	0.0 (6.3)	0.0 (13.3)	0.0 (19.1)
Northeast	7.9 (7.2)	9.4 (7.4)	9.7 (9.3)	0.0 (12.7)	** (")	** (")
North Central	5.0 (8.6)	13.5 (11.4)	14.9 (14.4)	0.0 (14.1)	** (")	** (")
South	3.6 (8.6)	11.0 (10.3)	10.2 (12.1)	0.0 (12.6)	** (")	** (")
West	2.4 (10.7)	2.4 (14.5)	6.8 (18.1)	0.0 (11.4)	** (")	** (")

DRG CLUSTER: 276
CHEMOTHERAPY
DRG(S): 410

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.7 (0.8)	0.9 (1.2)	1.2 (2.1)	0.1 (1.4)	0.0 (2.3)	0.0 (4.0)
Northeast	1.0 (1.6)	1.2 (2.3)	1.0 (4.0)	0.1 (2.9)	0.0 (4.8)	0.0 (7.9)
North Central	0.5 (1.4)	0.8 (2.0)	1.0 (3.9)	0.0 (2.4)	0.0 (3.9)	0.0 (7.0)
South	0.7 (1.7)	1.1 (2.5)	1.6 (4.2)	0.0 (2.6)	0.1 (5.1)	0.0 (9.5)
West	0.7 (1.9)	0.6 (2.8)	1.3 (4.5)	0.2 (3.1)	0.0 (5.1)	0.0 (8.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 277
HISTORY OF MALIGNANCY W/O ENDOSCOPY
DRG(S): 411

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.7 (9.8)	9.6 (15.2)	2.0 (15.2)	2.6 (13.4)	** (**)	** (**)
Northeast	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
South	0.0 (10.6)	10.2 (16.0)	0.0 (16.7)	2.6 (19.2)	** (**)	** (**)
West	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)

DRG CLUSTER: 278
HISTORY OF MALIGNANCY W/ ENDOSCOPY
DRG(S): 412

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
Northeast	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
North Central	** (**)	-- (--)	** (**)	** (**)	-- (--)	** (**)
South	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
West	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 279
OTHER MYELOPROLIF. DISORDERS OR POORLY DIFF. NEOPLASM DXS
DRG(S): 413, 414

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	38.3 (3.5)	39.3 (4.2)	42.9 (4.5)	23.1 (5.4)	34.4 (8.9)	41.9 (9.3)
Northeast	44.4 (7.6)	47.8 (8.6)	48.5 (8.6)	20.2 (11.8)	31.1 (19.7)	34.6 (19.7)
North Central	36.0 (6.3)	35.7 (7.9)	40.4 (9.1)	18.6 (11.3)	29.9 (19.5)	** (**)
South	39.9 (6.8)	39.8 (7.1)	41.9 (7.8)	26.7 (8.6)	42.0 (13.6)	59.1 (14.5)
West	31.5 (8.0)	30.1 (10.8)	38.8 (11.6)	20.8 (13.8)	** (**)	** (**)

CARDIOLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 86
CIRCULATORY DISORDERS W/ AMI
DRG(S): 121, 122, 123

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	9.1 (1.0)	17.8 (1.0)	25.9 (0.9)	1.0 (1.3)	4.6 (2.0)	11.8 (2.3)
Northeast	8.5 (2.0)	17.3 (2.0)	25.9 (1.7)	0.8 (2.6)	3.1 (3.8)	7.8 (4.5)
North Central	9.2 (2.1)	19.5 (2.1)	25.1 (1.9)	0.9 (2.7)	3.6 (4.1)	13.7 (4.4)
South	10.3 (1.8)	17.7 (1.8)	27.5 (1.6)	1.3 (2.4)	8.0 (3.8)	14.7 (4.0)
West	7.4 (2.4)	16.3 (2.5)	23.1 (2.3)	0.6 (3.0)	1.7 (4.5)	6.7 (5.6)

DRG CLUSTER: 87
CIRCULATORY DISORDERS EXCEPT AMI, W/ CARDIAC CATH. W/ COMPLEX DXS
DRG(S): 124

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (1.5)	2.5 (1.9)	5.3 (2.7)	0.1 (1.9)	0.2 (2.7)	0.6 (4.6)
Northeast	2.1 (3.6)	2.4 (4.2)	5.5 (6.4)	0.0 (4.2)	0.0 (6.2)	0.0 (10.8)
North Central	2.1 (2.7)	2.3 (3.5)	5.3 (5.3)	0.1 (3.2)	0.2 (4.8)	0.9 (7.9)
South	1.7 (2.7)	2.7 (3.3)	5.2 (4.8)	0.1 (3.7)	0.5 (5.3)	0.7 (9.0)
West	2.0 (3.7)	2.4 (4.2)	5.2 (5.8)	0.0 (4.6)	0.0 (5.8)	0.7 (9.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 88
CIRCULATORY DISORDERS EXCEPT AMI, W/ CARDIAC CATH. W/O COMPLEX DXS
DRG(S): 125

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	0.1 (1.3)	0.2 (1.9)	0.5 (3.6)	0.0 (0.9)	0.0 (1.6)	0.1 (3.2)
Northeast	0.2 (2.9)	0.0 (4.0)	1.7 (7.7)	0.0 (1.9)	0.0 (3.3)	0.0 (6.7)
North Central	0.1 (2.4)	0.5 (3.4)	0.3 (6.6)	0.0 (1.4)	0.1 (2.6)	0.2 (5.2)
South	0.0 (2.3)	0.1 (3.5)	0.0 (6.6)	0.0 (1.7)	0.0 (3.2)	0.0 (6.6)
West	0.1 (3.5)	0.0 (4.7)	0.4 (8.1)	0.0 (2.4)	0.0 (4.2)	0.0 (7.4)

DRG CLUSTER: 89
ACUTE & SUBACUTE ENDOCARDITIS
DRG(S): 126

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	7.1 (4.9)	11.6 (9.0)	22.1 (9.2)	2.5 (10.8)	** (")	** (")
Northeast	4.5 (8.5)	25.0 (17.4)	13.1 (18.3)	5.4 (18.5)	** (")	** (")
North Central	6.1 (10.8)	** (")	** (")	** (")	** (")	** (")
South	8.5 (10.2)	8.1 (17.1)	22.7 (16.4)	** (")	** (")	** (")
West	10.3 (9.7)	3.9 (16.8)	27.9 (18.6)	** (")	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 90
HEART FAILURE & SHOCK
DRG(S): 127

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.3 (1.0)	7.8 (0.9)	11.3 (0.6)	2.3 (2.3)	2.8 (2.1)	5.2 (1.5)
Northeast	4.6 (2.2)	7.8 (1.7)	12.8 (1.3)	1.0 (5.3)	2.0 (4.3)	3.6 (3.0)
North Central	5.4 (2.0)	8.4 (1.7)	10.7 (1.2)	1.7 (4.4)	3.2 (4.0)	5.8 (2.8)
South	5.7 (1.8)	7.9 (1.5)	11.4 (1.2)	3.3 (3.9)	3.5 (3.6)	6.2 (2.6)
West	5.0 (2.5)	6.3 (2.1)	9.7 (1.6)	2.5 (5.8)	1.2 (5.5)	4.2 (3.7)

DRG CLUSTER: 91
DEEP VEIN THROMBOPHLEBITIS
DRG(S): 128

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (3.0)	1.6 (3.6)	3.5 (3.5)	0.1 (2.3)	0.1 (4.1)	0.3 (4.4)
Northeast	1.2 (6.2)	3.7 (7.6)	4.3 (6.6)	0.0 (5.0)	0.4 (8.3)	1.1 (9.0)
North Central	1.2 (5.3)	1.3 (7.0)	3.1 (6.8)	0.0 (4.2)	0.0 (7.8)	0.0 (8.0)
South	1.3 (5.7)	1.2 (6.3)	4.3 (6.2)	0.2 (3.9)	0.0 (7.3)	0.0 (8.0)
West	1.0 (7.0)	0.0 (7.9)	1.0 (8.6)	0.0 (5.9)	0.0 (9.9)	0.0 (11.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 92
CARDIAC ARREST, UNEXPLAINED
DRG(S): 129

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	77.7 (6.4)	72.0 (7.1)	76.8 (6.2)	65.1 (18.3)	** (")	83.2 (18.1)
Northeast	79.0 (14.9)	76.5 (16.4)	79.9 (14.1)	** (")	** (")	** (")
North Central	79.9 (12.2)	70.6 (13.1)	72.2 (12.0)	** (")	** (")	** (")
South	82.0 (11.5)	67.3 (12.7)	75.9 (11.1)	** (")	** (")	** (")
West	64.8 (13.6)	78.8 (15.4)	81.4 (12.8)	** (")	** (")	** (")

DRG CLUSTER: 93
PERIPHERAL VASCULAR DISORDERS
DRG(S): 130, 131

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.3 (1.8)	5.2 (2.2)	10.4 (1.9)	0.3 (1.6)	0.7 (2.6)	2.2 (2.8)
Northeast	2.9 (3.7)	6.5 (4.4)	12.7 (3.8)	0.2 (3.5)	0.5 (5.4)	3.1 (5.6)
North Central	2.4 (3.3)	4.8 (3.9)	9.5 (3.6)	0.2 (2.9)	0.0 (4.7)	2.0 (5.0)
South	1.9 (3.4)	4.9 (3.9)	9.8 (3.5)	0.3 (3.0)	1.2 (4.9)	2.3 (5.0)
West	1.7 (4.5)	4.6 (5.6)	9.5 (5.0)	0.5 (4.1)	1.0 (6.7)	1.0 (7.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 94
ATHEROSCLEROSIS
DRG(S): 132, 133

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	1.7 (3.2)	3.5 (4.0)	7.5 (3.5)	0.1 (4.0)	0.9 (5.7)	2.0 (6.5)
Northeast	1.4 (7.5)	4.1 (9.2)	8.3 (8.4)	0.0 (9.1)	0.4 (10.9)	0.0 (14.0)
North Central	2.4 (6.1)	3.2 (8.1)	6.2 (7.2)	0.0 (7.2)	2.9 (10.6)	1.8 (12.2)
South	1.6 (4.9)	3.1 (6.1)	8.2 (5.5)	0.2 (6.9)	0.0 (10.4)	2.6 (10.5)
West	1.0 (8.9)	4.6 (10.2)	6.2 (8.5)	0.0 (10.8)	0.0 (16.5)	5.0 (18.2)

DRG CLUSTER: 95
HYPERTENSION
DRG(S): 134

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	0.3 (2.3)	1.7 (3.4)	3.6 (3.5)	0.0 (2.0)	0.1 (3.9)	0.2 (4.3)
Northeast	0.4 (5.8)	2.5 (8.3)	4.2 (8.1)	0.0 (4.9)	0.0 (8.8)	0.0 (10.0)
North Central	0.0 (4.2)	1.2 (6.4)	1.2 (6.8)	0.0 (3.8)	0.3 (7.3)	0.0 (8.3)
South	0.4 (3.6)	1.8 (5.3)	4.7 (5.6)	0.0 (3.0)	0.0 (6.0)	0.3 (6.9)
West	0.1 (6.9)	1.6 (9.1)	2.9 (9.6)	0.3 (6.2)	0.0 (11.0)	0.7 (11.2)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 96
CARDIAC CONGENITAL & VALVULAR DISORDERS
DRG(S): 135, 136, 137

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.8 (4.0)	3.9 (7.2)	10.8 (5.0)	1.6 (3.5)	0.0 (11.3)	0.7 (10.3)
Northeast	8.2 (8.8)	2.4 (14.0)	11.9 (9.6)	1.4 (8.6)	** (**)	2.2 (18.6)
North Central	3.3 (8.3)	5.4 (14.7)	10.8 (10.6)	0.4 (7.4)	** (**)	0.0 (18.7)
South	4.1 (6.7)	2.2 (13.6)	8.4 (9.3)	2.4 (5.1)	0.0 (19.2)	** (**)
West	4.4 (9.3)	6.8 (15.9)	12.9 (10.7)	0.5 (9.7)	** (**)	** (**)

DRG CLUSTER: 97
CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS
DRG(S): 138, 139

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (1.3)	3.1 (1.2)	4.2 (1.1)	0.2 (1.3)	0.3 (1.8)	0.8 (1.8)
Northeast	1.6 (2.7)	2.4 (2.7)	4.6 (2.3)	0.1 (2.9)	0.3 (3.8)	0.0 (3.8)
North Central	2.0 (2.5)	3.6 (2.5)	5.2 (2.1)	0.1 (2.5)	0.1 (3.6)	0.3 (3.5)
South	1.9 (2.2)	2.6 (2.1)	3.5 (1.8)	0.5 (2.3)	0.5 (3.2)	1.8 (3.1)
West	1.9 (3.0)	4.1 (2.8)	3.9 (2.5)	0.1 (3.2)	0.0 (3.9)	0.1 (3.9)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 98
ANGINA PECTORIS
DRG(S): 140

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (1.1)	0.7 (1.1)	1.4 (1.0)	0.0 (1.0)	0.1 (1.3)	0.1 (1.3)
Northeast	0.3 (2.3)	0.7 (2.3)	1.4 (2.0)	0.0 (1.9)	0.1 (2.4)	0.1 (2.5)
North Central	0.3 (2.1)	0.9 (2.3)	1.4 (2.0)	0.0 (1.9)	0.1 (2.6)	0.0 (2.6)
South	0.1 (2.0)	0.8 (1.9)	1.6 (1.7)	0.0 (1.8)	0.1 (2.3)	0.1 (2.3)
West	0.3 (3.0)	0.4 (2.9)	0.7 (2.6)	0.0 (2.4)	0.0 (3.0)	0.1 (3.2)

DRG CLUSTER: 99
SYNCOPE & COLLAPSE
DRG(S): 141, 142

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (2.0)	0.4 (2.2)	1.2 (1.6)	0.0 (1.7)	0.0 (2.6)	0.2 (2.1)
Northeast	0.6 (4.3)	0.9 (4.3)	1.8 (3.1)	0.0 (3.7)	0.0 (5.1)	0.1 (4.1)
North Central	0.1 (3.9)	0.6 (4.4)	0.8 (3.2)	0.0 (3.4)	0.0 (5.5)	0.1 (4.1)
South	0.2 (3.5)	0.1 (3.8)	1.1 (3.0)	0.0 (2.9)	0.0 (4.8)	0.5 (4.1)
West	0.5 (5.1)	0.2 (5.0)	1.1 (3.6)	0.0 (4.3)	0.0 (5.7)	0.1 (4.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 100
CHEST PAIN
DRG(S): 143

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (1.3)	0.4 (2.2)	1.2 (2.4)	0.0 (0.9)	0.1 (2.0)	0.4 (2.7)
Northeast	0.1 (3.0)	0.2 (4.9)	0.4 (5.4)	0.0 (1.9)	0.0 (4.3)	0.2 (5.8)
North Central	0.0 (2.6)	0.3 (4.5)	1.6 (4.9)	0.0 (1.8)	0.2 (4.3)	0.0 (5.5)
South	0.1 (2.3)	0.7 (3.8)	1.2 (4.1)	0.1 (1.5)	0.2 (3.7)	1.0 (5.0)
West	0.1 (3.1)	0.1 (4.5)	1.6 (5.1)	0.0 (1.9)	0.0 (3.8)	0.0 (5.4)

DRG CLUSTER: 101
OTHER CIRCULATORY SYSTEM DXS
DRG(S): 144, 145

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.1 (1.8)	10.8 (2.3)	13.6 (2.5)	0.8 (2.4)	4.6 (5.2)	8.3 (6.3)
Northeast	6.1 (3.9)	12.1 (4.8)	13.7 (5.4)	0.7 (5.1)	6.3 (10.0)	6.3 (12.8)
North Central	7.7 (3.5)	14.1 (4.5)	13.6 (5.0)	1.2 (4.7)	5.7 (10.7)	5.2 (12.2)
South	7.5 (3.2)	9.7 (4.2)	15.2 (4.4)	0.9 (4.2)	4.1 (9.6)	8.0 (12.1)
West	6.5 (4.3)	7.2 (5.1)	10.3 (5.3)	0.2 (5.5)	1.7 (11.1)	14.0 (13.1)

GASTROENTEROLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 116
G.I. HEMORRHAGE
DRG(S): 174, 175

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.7 (1.2)	4.9 (1.5)	7.8 (1.2)	0.3 (1.6)	0.7 (2.7)	1.6 (2.4)
Northeast	4.0 (2.7)	5.6 (3.2)	9.1 (2.3)	0.0 (3.6)	0.2 (5.2)	0.3 (4.5)
North Central	2.4 (2.6)	5.1 (3.1)	8.3 (2.3)	0.2 (3.4)	0.7 (5.7)	1.4 (4.6)
South	2.4 (2.2)	4.5 (2.7)	7.5 (2.2)	0.4 (2.8)	1.2 (4.9)	2.7 (4.5)
West	2.4 (2.6)	4.8 (3.3)	6.2 (2.7)	0.6 (3.5)	0.2 (6.1)	1.4 (5.3)

DRG CLUSTER: 117
COMPLICATED PEPTIC ULCER
DRG(S): 176

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.2 (4.5)	3.1 (5.6)	10.2 (4.8)	0.0 (4.9)	0.6 (9.9)	0.9 (9.0)
Northeast	2.2 (10.4)	7.7 (12.6)	8.3 (10.1)	0.0 (11.6)	** (**)	0.0 (16.1)
North Central	1.2 (8.3)	3.3 (10.7)	10.5 (9.2)	0.0 (10.6)	0.0 (18.2)	2.1 (19.4)
South	3.5 (8.0)	1.7 (9.6)	12.2 (8.8)	0.0 (7.5)	0.0 (17.1)	0.0 (16.6)
West	1.1 (9.8)	1.1 (12.6)	8.1 (10.6)	0.0 (11.6)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 118
UNCOMPLICATED PEPTIC ULCER
DRG(S): 177, 178

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (2.7)	1.1 (3.9)	2.2 (3.6)	0.0 (2.1)	0.0 (5.0)	0.0 (5.5)
Northeast	0.4 (6.6)	1.2 (9.0)	2.2 (7.6)	0.0 (5.3)	0.0 (11.4)	0.0 (11.4)
North Central	0.2 (5.3)	2.0 (7.6)	2.4 (7.0)	0.0 (4.1)	0.0 (10.6)	0.0 (11.2)
South	0.0 (4.1)	0.7 (6.4)	2.6 (6.2)	0.0 (3.0)	0.0 (7.7)	0.0 (9.3)
West	0.0 (6.5)	0.5 (9.7)	0.9 (9.0)	0.0 (5.8)	0.0 (12.9)	0.0 (13.6)

DRG CLUSTER: 119
INFLAMMATORY BOWEL DISEASE
DRG(S): 179

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (2.9)	2.0 (6.9)	5.9 (6.9)	0.0 (2.7)	0.0 (10.5)	2.3 (13.8)
Northeast	0.4 (5.5)	1.9 (12.3)	8.6 (12.9)	0.0 (5.0)	0.0 (17.0)	** (**)
North Central	1.2 (5.5)	4.3 (13.5)	5.5 (13.8)	0.0 (5.4)	** (**)	** (**)
South	0.0 (5.3)	1.2 (14.0)	5.9 (12.9)	0.0 (4.9)	** (**)	** (**)
West	0.0 (7.0)	0.0 (16.4)	1.9 (16.8)	0.0 (6.8)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 120
G.I. OBSTRUCTION
DRG(S): 180, 181

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	3.1 (2.2)	5.5 (2.5)	8.7 (1.8)	0.1 (1.8)	0.4 (3.1)	1.3 (2.8)
Northeast	4.0 (4.9)	5.8 (5.3)	10.3 (3.7)	0.3 (3.8)	0.0 (6.6)	1.3 (5.8)
North Central	2.8 (4.1)	4.6 (4.8)	8.6 (3.5)	0.1 (3.5)	0.3 (6.5)	0.9 (5.8)
South	3.5 (3.9)	6.1 (4.4)	9.0 (3.3)	0.0 (3.2)	0.6 (5.8)	0.6 (5.2)
West	2.0 (4.9)	5.3 (5.2)	6.0 (4.2)	0.0 (3.8)	0.5 (6.3)	2.9 (6.1)

DRG CLUSTER: 121
ESOPHAGITIS, GASTROENT. & MISC. DIGESTIVE DISORDERS
DRG(S): 182, 183, 184

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	0.4 (0.6)	1.5 (1.1)	3.0 (0.9)	0.0 (0.5)	0.1 (1.5)	0.2 (1.6)
Northeast	0.7 (1.5)	1.4 (2.4)	4.1 (2.1)	0.0 (1.2)	0.0 (3.3)	0.4 (3.4)
North Central	0.4 (1.2)	1.3 (2.2)	2.6 (1.9)	0.0 (1.1)	0.1 (3.2)	0.2 (3.2)
South	0.3 (1.0)	1.6 (1.8)	3.0 (1.6)	0.0 (0.8)	0.1 (2.5)	0.2 (2.8)
West	0.3 (1.5)	1.3 (2.5)	2.0 (2.2)	0.0 (1.4)	0.1 (3.6)	0.2 (3.8)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 124
OTHER DIGESTIVE SYSTEM DXS
DRG(S): 188, 189, 190

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	3.3 (2.1)	7.5 (3.1)	12.3 (2.5)	0.0 (1.6)	0.4 (4.5)	2.9 (4.4)
Northeast	4.5 (4.3)	8.7 (6.5)	13.7 (4.7)	0.0 (3.2)	0.0 (8.1)	2.6 (8.1)
North Central	2.6 (4.1)	6.8 (6.2)	13.8 (5.2)	0.0 (3.3)	0.0 (9.6)	5.1 (9.6)
South	2.7 (3.5)	5.5 (5.4)	10.4 (4.6)	0.0 (2.7)	0.4 (8.1)	1.0 (7.7)
West	4.4 (4.8)	10.7 (6.8)	11.9 (6.1)	0.1 (4.0)	1.6 (11.3)	5.6 (11.4)

OPHTHALMOLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 25
RETINAL PROCEDURES
DRG(S): 36

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (3.8)	0.0 (5.6)	0.0 (7.3)	0.0 (2.0)	0.0 (3.3)	0.0 (4.3)
Northeast	0.0 (8.1)	0.0 (11.2)	0.0 (13.7)	0.0 (4.2)	0.0 (7.2)	0.0 (9.6)
North Central	0.0 (6.2)	0.0 (10.9)	0.0 (14.9)	0.0 (3.6)	0.0 (6.1)	0.0 (7.4)
South	0.0 (8.6)	0.0 (13.1)	0.0 (15.9)	0.0 (4.4)	0.0 (7.2)	0.0 (10.4)
West	0.0 (8.0)	0.0 (10.4)	0.0 (14.1)	0.0 (3.9)	0.0 (6.3)	0.0 (8.0)

DRG CLUSTER: 26
ORBITAL PROCEDURES
DRG(S): 37

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (6.0)	0.0 (14.2)	2.3 (11.5)	0.0 (4.0)	0.0 (13.5)	0.0 (11.9)
Northeast	0.0 (13.0)	** (**)	** (**)	0.0 (8.9)	** (**)	** (**)
North Central	0.0 (10.5)	** (**)	0.0 (20.0)	0.0 (6.5)	** (**)	** (**)
South	0.0 (11.6)	** (**)	** (**)	0.0 (7.9)	** (**)	** (**)
West	1.5 (13.7)	** (**)	** (**)	0.0 (9.6)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 27
PRIMARY IRIS PROCEDURES
DRG(S): 38

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (16.7)	** (")	** (")	0.0 (11.7)	0.0 (18.5)	0.0 (13.9)
Northeast	** (")	** (")	** (")	** (")	** (")	** (")
North Central	** (")	** (")	** (")	** (")	** (")	** (")
South	** (")	** (")	** (")	0.0 (18.9)	** (")	** (")
West	** (")	** (")	** (")	** (")	** (")	** (")

DRG CLUSTER: 28
LENS PROCEDURES W/ OR W/O VITRECTOMY
DRG(S): 39

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (5.7)	0.1 (4.7)	0.0 (3.6)	0.0 (4.2)	0.0 (4.1)	0.0 (2.8)
Northeast	0.0 (8.4)	0.0 (6.2)	0.0 (4.7)	0.0 (6.3)	0.0 (5.3)	0.0 (3.5)
North Central	0.0 (12.0)	0.0 (10.6)	0.0 (8.5)	0.0 (8.8)	0.0 (10.6)	0.0 (6.1)
South	0.0 (11.9)	0.9 (10.8)	0.0 (8.2)	0.0 (8.1)	0.0 (9.7)	0.0 (7.6)
West	0.0 (19.1)	0.0 (18.6)	0.0 (18.7)	0.0 (14.5)	0.0 (19.2)	0.0 (12.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 29
EXTRAOCULAR PROCEDURES EXCEPT ORBIT
DRG(S): 40, 41

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (6.1)	0.0 (13.2)	0.0 (10.8)	0.0 (3.0)	0.0 (8.4)	0.0 (7.3)
Northeast	0.0 (12.6)	** (")	0.0 (17.7)	0.0 (5.5)	0.0 (14.6)	0.0 (11.9)
North Central	0.0 (11.1)	** (")	** (")	0.0 (6.2)	0.0 (14.9)	0.0 (13.4)
South	0.0 (10.2)	** (")	** (")	0.0 (5.2)	0.0 (17.2)	0.0 (16.8)
West	0.0 (17.3)	** (")	** (")	0.0 (8.1)	** (")	0.0 (19.5)

DRG CLUSTER: 30
INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS & LENS
DRG(S): 42

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (4.2)	0.0 (5.7)	0.5 (5.5)	0.0 (2.5)	0.0 (3.6)	0.0 (3.2)
Northeast	0.0 (8.4)	0.0 (11.4)	0.0 (12.0)	0.0 (6.3)	0.0 (8.5)	0.0 (8.2)
North Central	0.0 (7.0)	0.0 (9.2)	0.6 (8.4)	0.0 (4.2)	0.0 (5.2)	0.0 (4.3)
South	0.0 (8.4)	0.0 (12.7)	0.0 (12.1)	0.0 (4.7)	0.0 (7.9)	0.0 (7.5)
West	0.0 (11.4)	0.0 (14.0)	1.7 (14.8)	0.0 (6.0)	0.0 (8.7)	0.0 (8.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 31
HYPHEMA
DRG(S): 43

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (12.0)	** (")	** (")	0.0 (4.6)	** (")	** (")
Northeast	** (")	** (")	** (")	0.0 (10.2)	** (")	** (")
North Central	0.0 (19.4)	** (")	** (")	0.0 (7.5)	** (")	** (")
South	** (")	** (")	** (")	0.0 (9.0)	** (")	** (")
West	** (")	** (")	-- (--)	0.0 (11.9)	** (")	** (")

DRG CLUSTER: 32
ACUTE MAJOR EYE INFECTIONS
DRG(S): 44

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (7.3)	2.3 (18.2)	1.7 (14.5)	0.0 (3.1)	0.0 (14.4)	0.0 (11.9)
Northeast	0.0 (18.3)	** (")	** (")	0.0 (7.0)	** (")	** (")
North Central	0.0 (13.2)	** (")	** (")	0.0 (5.8)	** (")	** (")
South	1.0 (12.6)	** (")	** (")	0.0 (5.6)	** (")	** (")
West	0.0 (16.8)	** (")	** (")	0.0 (7.2)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 33
NEUROLOGICAL EYE DISORDERS
DRG(S): 45

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (8.1)	1.5 (11.4)	0.0 (12.1)	0.0 (5.9)	0.0 (10.3)	4.5 (13.9)
Northeast	0.0 (18.7)	** (")	** (")	0.0 (13.4)	0.0 (19.4)	** (")
North Central	0.0 (13.3)	4.4 (19.4)	0.0 (19.5)	0.0 (10.1)	0.0 (18.7)	** (")
South	0.0 (14.2)	0.0 (19.4)	** (")	0.0 (9.8)	0.0 (19.5)	** (")
West	** (")	** (")	** (")	0.0 (18.1)	** (")	** (")

DRG CLUSTER: 34
OTHER DISORDERS OF EYE
DRG(S): 46, 47, 48

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (5.0)	0.5 (8.4)	2.8 (7.7)	0.1 (3.6)	0.0 (9.1)	0.5 (8.9)
Northeast	0.8 (11.1)	0.0 (15.6)	5.4 (13.1)	0.0 (8.1)	0.0 (16.5)	0.0 (15.7)
North Central	0.0 (8.6)	1.5 (14.9)	1.8 (15.7)	0.1 (6.6)	0.0 (19.5)	1.8 (16.6)
South	1.9 (8.7)	0.0 (16.3)	1.4 (15.3)	0.0 (6.1)	0.0 (16.7)	0.0 (17.6)
West	0.0 (13.1)	** (")	0.0 (18.9)	0.4 (8.9)	** (")	** (")

EAR, NOSE, THROAT

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 35
MAJOR HEAD & NECK PROCEDURES
DRG(S): 49

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.3 (5.0)	5.7 (6.3)	5.0 (9.7)	0.0 (5.4)	0.0 (8.7)	0.0 (14.3)
Northeast	1.6 (10.5)	5.9 (12.0)	** (")	0.0 (12.5)	0.0 (18.9)	** (")
North Central	1.0 (8.1)	4.2 (12.5)	5.0 (17.8)	0.0 (9.6)	0.0 (18.2)	** (")
South	4.6 (10.2)	6.0 (12.1)	1.7 (16.9)	0.0 (9.2)	0.0 (13.6)	** (")
West	2.7 (13.6)	6.8 (13.6)	** (")	0.0 (13.3)	** (")	** (")

DRG CLUSTER: 36
SIALOADENECTOMY
DRG(S): 50

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (9.6)	0.0 (10.0)	3.4 (13.6)	0.0 (3.0)	0.0 (5.9)	0.0 (9.1)
Northeast	0.0 (18.1)	0.0 (17.7)	** (")	0.0 (6.1)	0.0 (12.3)	0.0 (17.9)
North Central	0.0 (18.3)	0.0 (19.1)	** (")	0.0 (5.5)	0.0 (11.2)	0.0 (15.2)
South	0.0 (19.7)	0.0 (19.7)	** (")	0.0 (5.7)	0.0 (12.1)	0.0 (19.9)
West	** (")	** (")	** (")	0.0 (6.6)	0.0 (12.0)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 37
SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY
DRG(S): 51

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	** (**)	** (**)	** (**)	0.0 (7.9)	0.0 (16.9)	** (**)
Northeast	** (**)	** (**)	** (**)	0.0 (15.4)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	0.0 (15.4)	** (**)	** (**)
South	** (**)	** (**)	** (**)	0.0 (15.1)	** (**)	** (**)
West	** (**)	** (**)	** (**)	0.0 (17.9)	** (**)	** (**)

DRG CLUSTER: 38
CLEFT LIP & PALATE REPAIR
DRG(S): 52

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (15.5)	** (**)	-- (--)	0.0 (3.5)	** (**)	-- (--)
Northeast	** (**)	** (**)	-- (--)	0.0 (7.9)	-- (--)	-- (--)
North Central	** (**)	** (**)	-- (--)	0.0 (5.9)	** (**)	-- (--)
South	** (**)	** (**)	-- (--)	0.0 (6.3)	** (**)	-- (--)
West	** (**)	-- (--)	-- (--)	0.0 (8.7)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 39
SINUS & MASTOID PROCEDURES
DRG(S): 53, 54

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (4.7)	0.4 (8.4)	1.1 (12.6)	0.1 (1.5)	0.0 (4.6)	0.0 (8.1)
Northeast	1.2 (9.8)	0.0 (18.2)	** (")	0.0 (3.2)	0.0 (10.0)	0.0 (17.4)
North Central	1.1 (8.8)	0.0 (15.7)	** (")	0.0 (2.7)	0.0 (8.5)	0.0 (14.2)
South	1.8 (8.9)	1.2 (14.2)	** (")	0.2 (2.8)	0.0 (8.6)	0.0 (15.2)
West	0.0 (10.8)	** (")	** (")	0.0 (3.5)	0.0 (10.3)	0.0 (19.1)

DRG CLUSTER: 40
MISCELLANEOUS EAR, NOSE & THROAT PROCEDURES
DRG(S): 55

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (4.8)	0.8 (9.6)	3.1 (13.0)	0.0 (1.2)	0.0 (5.0)	0.0 (8.6)
Northeast	2.7 (9.8)	2.8 (19.2)	** (")	0.0 (2.3)	0.0 (9.8)	0.0 (20.0)
North Central	0.0 (9.0)	0.0 (17.2)	** (")	0.0 (2.2)	0.0 (8.4)	0.0 (14.6)
South	3.6 (8.6)	0.2 (18.3)	** (")	0.0 (2.5)	0.0 (10.3)	0.0 (15.1)
West	0.0 (12.4)	** (")	** (")	0.0 (3.5)	0.0 (12.5)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 41
RHINOPLASTY
DRG(S): 56

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (9.8)	** (**)	** (**)	0.0 (2.2)	0.0 (11.3)	0.0 (19.7)
Northeast	0.0 (18.1)	** (**)	** (**)	0.0 (3.8)	** (**)	** (**)
North Central	0.0 (17.8)	** (**)	** (**)	0.0 (3.9)	0.0 (18.9)	** (**)
South	0.0 (17.9)	** (**)	** (**)	0.0 (4.2)	** (**)	** (**)
West	** (**)	** (**)	** (**)	0.0 (6.4)	** (**)	** (**)

DRG CLUSTER: 42
T&A PROC. EXCEPT TONSILLECTOMY & ADENOIDECTOMY
DRG(S): 57, 58

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (5.2)	** (**)	** (**)	0.0 (1.7)	** (**)	** (**)
Northeast	0.0 (10.1)	** (**)	** (**)	0.0 (3.4)	** (**)	** (**)
North Central	0.0 (9.5)	** (**)	** (**)	0.0 (3.3)	** (**)	** (**)
South	0.6 (10.0)	** (**)	** (**)	0.0 (3.0)	** (**)	** (**)
West	0.0 (12.8)	** (**)	** (**)	0.0 (4.9)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 43
TONSILLECTOMY & ADENOIDECTOMY PROCEDURES
DRG(S): 59, 60

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (5.1)	** (")	** (")	0.0 (0.9)	** (")	** (")
Northeast	0.0 (10.2)	** (")	-- (--)	0.0 (1.7)	** (")	** (")
North Central	0.0 (10.2)	** (")	** (")	0.0 (1.7)	** (")	** (")
South	0.0 (9.2)	** (")	-- (--)	0.0 (1.7)	** (")	** (")
West	0.9 (11.2)	-- (--)	-- (--)	0.0 (2.7)	** (")	** (")

DRG CLUSTER: 44
MYRINGOTOMY W/ TUBE INSERTION
DRG(S): 61, 62

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (12.6)	** (")	** (")	0.0 (5.3)	** (")	** (")
Northeast	** (")	** (")	** (")	0.0 (12.5)	** (")	** (")
North Central	** (")	** (")	** (")	0.0 (9.3)	** (")	** (")
South	0.0 (18.7)	-- (--)	** (")	0.0 (8.5)	** (")	** (")
West	** (")	** (")	** (")	0.0 (16.2)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 45
OTHER EAR, NOSE & THROAT O.R. PROCEDURES
DRG(S): 63

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	2.6 (6.5)	5.7 (9.9)	6.1 (10.7)	0.0 (3.8)	0.0 (9.3)	0.0 (11.4)
Northeast	3.6 (13.7)	4.0 (19.5)	** (")	0.0 (8.4)	** (")	** (")
North Central	1.2 (11.1)	3.0 (17.9)	13.0 (19.9)	0.0 (7.0)	0.0 (17.4)	** (")
South	3.7 (12.0)	6.2 (19.2)	** (")	0.0 (6.8)	0.0 (15.6)	0.0 (17.9)
West	1.7 (16.6)	** (")	** (")	0.0 (8.5)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 47
DYSEQUILBRIUM
DRG(S): 65

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (3.7)	0.2 (4.1)	0.3 (3.7)	0.0 (2.4)	0.0 (3.6)	0.1 (3.8)
Northeast	0.5 (8.7)	0.0 (9.0)	0.9 (8.1)	0.0 (5.6)	0.0 (7.4)	0.0 (8.2)
North Central	0.0 (7.2)	0.0 (7.9)	0.3 (7.1)	0.1 (4.4)	0.0 (6.9)	0.0 (7.2)
South	0.0 (6.3)	0.6 (7.1)	0.1 (6.7)	0.0 (3.9)	0.0 (6.5)	0.0 (7.1)
West	0.0 (8.5)	0.0 (9.1)	0.2 (7.8)	0.1 (6.4)	0.0 (8.6)	0.3 (7.9)

DRG CLUSTER: 48
EPISTAXIS
DRG(S): 66

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (5.3)	1.3 (6.9)	3.0 (6.4)	0.0 (3.9)	0.0 (6.6)	0.0 (6.8)
Northeast	0.0 (11.0)	1.1 (13.6)	5.9 (12.8)	0.0 (9.0)	0.0 (13.7)	0.0 (13.9)
North Central	0.6 (10.1)	1.3 (14.1)	2.5 (11.6)	0.0 (7.5)	0.0 (12.2)	0.0 (12.0)
South	0.6 (9.9)	1.3 (12.2)	0.8 (11.5)	0.0 (6.7)	0.0 (12.5)	0.0 (13.4)
West	0.0 (11.8)	1.6 (15.8)	5.0 (16.5)	0.0 (9.0)	0.0 (14.8)	0.0 (16.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 49
EPIGLOTTITIS
DRG(S): 67

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (11.4)	** (**)	** (**)	0.0 (5.8)	** (**)	** (**)
Northeast	** (**)	** (**)	** (**)	0.0 (12.6)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	0.0 (11.1)	** (**)	-- (--)
South	** (**)	** (**)	** (**)	0.0 (10.7)	** (**)	-- (--)
West	0.0 (19.2)	** (**)	** (**)	0.0 (12.8)	** (**)	** (**)

DRG CLUSTER: 50
OTITIS MEDIA & URI
DRG(S): 68, 69, 70

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (1.5)	1.1 (4.3)	1.9 (3.8)	0.0 (1.1)	0.0 (6.6)	1.1 (6.4)
Northeast	0.1 (3.8)	1.2 (10.7)	4.3 (8.5)	0.0 (2.6)	0.0 (15.6)	0.0 (19.7)
North Central	0.2 (2.8)	0.6 (10.2)	0.9 (8.7)	0.0 (2.2)	0.0 (14.2)	0.0 (13.8)
South	0.2 (2.3)	0.8 (6.3)	1.8 (5.8)	0.0 (1.7)	0.0 (9.6)	1.8 (9.1)
West	0.2 (3.9)	2.6 (9.8)	0.5 (8.5)	0.0 (3.0)	0.0 (17.7)	0.0 (15.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 51
LARYNGOTRACHEITIS
DRG(S): 71

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (6.1)	** (")	** (")	0.0 (1.9)	** (")	** (")
Northeast	0.0 (15.0)	** (")	-- (--)	0.0 (4.3)	-- (--)	-- (--)
North Central	0.7 (11.0)	-- (--)	** (")	0.0 (3.6)	-- (--)	** (")
South	1.1 (11.7)	** (")	** (")	0.0 (3.4)	** (")	** (")
West	1.1 (12.2)	-- (--)	** (")	0.0 (3.9)	** (")	-- (--)

DRG CLUSTER: 52
NASAL TRAUMA & DEFORMITY
DRG(S): 72

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (8.1)	** (")	** (")	0.0 (6.0)	** (")	0.0 (19.4)
Northeast	0.0 (16.9)	** (")	** (")	0.0 (12.0)	** (")	** (")
North Central	0.0 (16.4)	** (")	** (")	0.0 (12.7)	** (")	** (")
South	0.0 (14.3)	** (")	** (")	0.0 (9.9)	** (")	** (")
West	0.0 (18.2)	** (")	** (")	0.0 (14.3)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 53
OTHER EAR, NOSE & THROAT DIAGNOSES
DRG(S): 73, 74

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	2.1 (4.3)	4.3 (7.7)	8.9 (6.1)	0.1 (2.4)	0.5 (7.7)	0.0 (8.6)
Northeast	1.3 (9.5)	5.9 (16.6)	3.1 (12.2)	0.3 (5.1)	1.7 (14.8)	0.0 (18.5)
North Central	0.0 (8.2)	8.9 (14.8)	9.7 (11.4)	0.1 (4.8)	0.0 (14.3)	0.0 (15.9)
South	2.7 (7.2)	0.8 (12.8)	12.6 (11.1)	0.0 (4.2)	0.0 (14.6)	0.0 (15.2)
West	4.8 (10.2)	3.8 (19.4)	7.4 (15.7)	0.1 (5.8)	0.0 (18.6)	** (**)

CARDIOTHORACIC SURGERY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 54
MAJOR CHEST PROCEDURES
DRG(S): 75

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.9 (2.0)	6.5 (2.6)	13.3 (4.2)	0.5 (2.6)	0.9 (4.6)	2.0 (8.7)
Northeast	5.5 (3.9)	8.6 (5.3)	13.2 (8.0)	0.9 (5.5)	0.6 (9.5)	0.0 (19.2)
North Central	5.2 (3.8)	7.8 (5.3)	14.8 (8.6)	0.0 (5.1)	1.7 (9.0)	3.4 (15.5)
South	5.2 (3.6)	4.8 (4.8)	14.2 (7.7)	0.8 (4.5)	0.5 (8.8)	3.2 (16.6)
West	2.9 (4.6)	5.3 (5.8)	9.9 (10.2)	.0.0 (5.8)	1.0 (10.0)	0.0 (18.9)

DRG CLUSTER: 55
OTHER RESPIRATORY SYSTEM O.R. PROCEDURES
DRG(S): 76, 77

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.1 (2.2)	9.6 (2.8)	15.2 (3.5)	0.7 (3.5)	0.6 (6.5)	2.8 (8.3)
Northeast	6.7 (4.0)	10.9 (5.4)	18.5 (6.4)	0.9 (6.6)	0.0 (11.5)	0.0 (16.0)
North Central	6.9 (4.4)	9.7 (5.4)	10.0 (7.4)	0.8 (7.3)	3.0 (14.4)	4.7 (18.2)
South	6.9 (4.0)	8.4 (5.0)	17.5 (6.4)	0.6 (5.7)	0.0 (12.1)	3.9 (13.7)
West	9.0 (5.5)	9.9 (6.9)	10.7 (8.9)	0.0 (9.7)	0.0 (14.8)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 59
MAJOR CHEST TRAUMA
DRG(S): 83, 84

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	1.1 (3.6)	0.6 (5.9)	3.9 (4.4)	0.0 (4.2)	0.0 (9.1)	0.0 (7.6)
Northeast	0.7 (7.8)	0.0 (14.6)	2.5 (9.3)	0.0 (8.8)	** (**)	0.0 (16.5)
North Central	0.8 (7.0)	0.7 (10.5)	2.5 (8.6)	0.0 (9.5)	0.0 (17.9)	0.0 (13.8)
South	1.7 (6.3)	0.5 (10.8)	5.8 (8.0)	0.0 (6.9)	0.0 (15.9)	0.0 (14.0)
West	0.6 (7.8)	1.1 (12.5)	3.7 (10.0)	0.0 (9.7)	0.0 (19.1)	0.0 (17.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 69
HEART TRANSPLANT
DRG(S): 103

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	14.0 (9.0)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
Northeast	** (**)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
North Central	19.6 (13.8)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
South	9.0 (12.9)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
West	** (**)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)

DRG CLUSTER: 70
CARDIAC VALVE PROCEDURES W/ PUMP & W/ CARDIAC CATH.
DRG(S): 104

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	10.2 (3.9)	15.0 (4.2)	19.7 (5.5)	3.2 (10.3)	0.0 (13.8)	** (**)
Northeast	11.8 (9.7)	17.9 (10.8)	13.3 (15.6)	** (**)	** (**)	** (**)
North Central	9.0 (7.3)	22.3 (7.2)	20.2 (10.0)	2.6 (17.8)	** (**)	** (**)
South	12.8 (7.6)	9.1 (8.4)	16.1 (10.7)	5.7 (18.1)	** (**)	** (**)
West	7.7 (7.3)	10.4 (8.0)	25.1 (10.0)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 71
CARDIAC VALVE PROCEDURES W/ PUMP & W/O CARDIAC CATH.
DRG(S): 105

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	7.3 (3.1)	9.9 (3.7)	15.5 (5.6)	1.8 (6.1)	4.7 (9.7)	1.7 (15.6)
Northeast	6.9 (7.5)	12.3 (8.7)	11.4 (14.6)	0.0 (18.2)	** (")	** (")
North Central	8.6 (5.5)	14.0 (7.2)	21.2 (11.1)	1.0 (9.8)	7.0 (16.2)	** (")
South	7.7 (6.8)	8.4 (8.4)	14.6 (11.8)	4.1 (11.1)	** (")	** (")
West	6.2 (5.4)	6.7 (6.4)	14.3 (9.2)	0.9 (14.0)	0.0 (18.6)	** (")

DRG CLUSTER: 72
CORONARY BYPASS W/ CARDIAC CATH.
DRG(S): 106

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.5 (1.6)	7.9 (1.7)	12.8 (3.1)	1.3 (2.8)	0.7 (3.9)	1.0 (8.2)
Northeast	4.6 (3.9)	7.4 (4.2)	15.5 (7.4)	0.0 (7.6)	1.6 (9.4)	** (")
North Central	5.1 (2.8)	10.2 (3.2)	10.7 (5.6)	0.7 (4.0)	0.6 (5.8)	0.0 (12.0)
South	3.4 (3.1)	8.0 (3.4)	11.6 (6.5)	3.5 (5.9)	0.2 (9.5)	0.0 (18.6)
West	4.8 (3.0)	5.6 (3.3)	14.3 (5.8)	0.7 (6.5)	0.5 (8.7)	2.4 (18.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 73
CORONARY BYPASS W/O CARDIAC CATH.
DRG(S): 107

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.5 (1.6)	5.6 (2.0)	8.1 (3.7)	0.3 (2.7)	0.5 (3.9)	1.7 (8.9)
Northeast	3.6 (3.5)	6.0 (4.3)	10.8 (8.4)	0.0 (6.1)	0.6 (8.6)	** (**)
North Central	3.4 (2.8)	5.8 (3.6)	7.2 (6.7)	0.5 (4.3)	0.6 (6.3)	0.0 (15.0)
South	3.4 (3.5)	6.0 (4.3)	8.1 (8.1)	0.3 (5.7)	0.0 (9.0)	** (**)
West	3.6 (3.1)	4.7 (3.6)	7.2 (6.6)	0.0 (6.9)	0.5 (8.6)	3.5 (16.5)

DRG CLUSTER: 74
OTHER CARDIOTHORACIC OR VASCULAR PROCEDURES W/ PUMP
DRG(S): 108

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	14.1 (4.2)	19.3 (9.9)	24.6 (14.6)	3.6 (5.1)	8.1 (19.4)	** (**)
Northeast	13.3 (12.6)	** (**)	** (**)	0.7 (17.0)	** (**)	-- (--)
North Central	14.6 (7.4)	** (**)	** (**)	2.4 (10.9)	** (**)	** (**)
South	13.9 (6.8)	13.7 (17.3)	** (**)	4.7 (7.0)	** (**)	** (**)
West	14.6 (9.3)	21.0 (16.8)	** (**)	2.1 (13.4)	** (**)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 75
OTHER CARDIOTHORACIC PROCEDURES W/O PUMP
DRG(S): 109

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	19.9 (3.3)	39.7 (4.8)	28.5 (5.5)	3.5 (5.0)	6.5 (12.7)	4.3 (11.1)
Northeast	21.3 (7.1)	41.2 (10.0)	27.3 (10.0)	2.9 (11.3)	** (")	** (")
North Central	23.8 (5.9)	40.8 (8.1)	25.5 (10.1)	3.0 (10.1)	** (")	4.8 (17.1)
South	17.0 (6.1)	36.2 (10.1)	27.6 (11.0)	4.5 (7.7)	** (")	** (")
West	17.0 (8.4)	39.7 (11.3)	38.1 (14.3)	1.6 (12.7)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 80
PERM CARDIAC PACEMAKER IMPLANT W/ AMI, HEART FAILURE OR SHOCK
DRG(S): 115

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	11.3 (12.8)	8.1 (8.6)	11.4 (6.3)	** (")	** (")	** (")
Northeast	** (")	11.7 (18.7)	11.2 (12.8)	** (")	** (")	** (")
North Central	** (")	7.9 (18.9)	14.9 (12.0)	** (")	** (")	** (")
South	** (")	3.8 (14.8)	11.5 (11.6)	** (")	** (")	** (")
West	** (")	10.7 (17.2)	6.1 (14.4)	** (")	-- (--)	** (")

DRG CLUSTER: 81
PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK
DRG(S): 116

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.7 (5.2)	1.1 (3.6)	2.3 (2.5)	0.0 (6.6)	0.0 (5.5)	0.4 (4.2)
Northeast	0.9 (12.0)	0.8 (8.1)	4.3 (5.2)	0.0 (14.4)	0.0 (12.2)	0.5 (9.0)
North Central	1.6 (10.3)	1.5 (7.7)	1.4 (5.1)	0.0 (12.8)	0.0 (11.3)	0.5 (8.3)
South	0.5 (9.1)	1.5 (5.8)	2.2 (4.2)	0.0 (12.3)	0.0 (9.5)	0.4 (7.4)
West	0.0 (10.7)	0.0 (8.3)	1.2 (5.7)	0.0 (13.8)	0.0 (12.1)	0.0 (9.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 82
CARDIAC PACEMAKER REPLACE & REVIS EXCEPT PULSE GENERATOR REPLACEMENT
DRG(S): 117

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.8 (6.3)	3.2 (4.2)	3.3 (2.9)	0.0 (7.2)	0.0 (6.7)	0.1 (4.8)
Northeast	5.6 (13.0)	7.4 (9.0)	5.4 (6.0)	0.0 (17.0)	0.0 (13.6)	0.0 (10.5)
North Central	6.1 (12.1)	3.0 (8.5)	3.5 (5.9)	0.0 (13.5)	0.0 (14.2)	0.3 (9.4)
South	1.2 (12.5)	2.4 (7.5)	2.2 (5.3)	0.0 (13.6)	0.0 (11.6)	0.0 (8.5)
West	2.4 (13.2)	0.6 (9.0)	2.5 (6.5)	0.0 (14.6)	0.0 (15.3)	0.4 (10.7)

DRG CLUSTER: 83
CARDIAC PACEMAKER PULSE GENERATOR REPLACEMENT
DRG(S): 118

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.9 (9.3)	2.0 (7.6)	2.5 (4.8)	0.0 (10.0)	0.0 (8.8)	0.0 (5.8)
Northeast	2.5 (17.8)	4.8 (14.4)	3.1 (8.9)	** (**)	0.0 (17.7)	0.0 (10.8)
North Central	0.0 (19.2)	1.7 (16.0)	0.8 (9.6)	0.0 (18.1)	0.0 (16.0)	0.0 (11.2)
South	1.9 (16.3)	0.3 (14.3)	3.7 (9.0)	0.0 (18.3)	0.0 (17.0)	0.0 (11.1)
West	** (**)	0.0 (16.9)	1.8 (11.3)	** (**)	** (**)	0.0 (14.0)

DENTISTRY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 113
MOUTH PROCEDURES
DRG(S): 168, 169

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (2.5)	1.7 (6.7)	2.9 (7.7)	0.0 (1.4)	0.0 (6.6)	0.0 (8.3)
Northeast	0.0 (5.8)	2.1 (12.8)	10.1 (15.6)	0.0 (3.5)	0.0 (15.3)	0.0 (19.2)
North Central	0.2 (4.6)	0.0 (13.2)	0.0 (13.6)	0.0 (2.5)	0.0 (12.1)	0.0 (14.3)
South	0.1 (4.4)	0.0 (12.0)	1.5 (13.8)	0.0 (2.4)	0.0 (11.0)	0.0 (13.9)
West	0.2 (5.8)	7.1 (16.9)	** (**)	0.0 (2.8)	0.0 (16.2)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 122
DENTAL & ORAL DISORDERS EXCEPT EXTRACTIONS & RESTORATIONS
DRG(S): 185, 186

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (2.9)	12.1 (8.2)	10.1 (8.4)	0.4 (2.7)	1.8 (12.3)	1.1 (13.8)
Northeast	2.1 (5.9)	17.4 (19.1)	16.4 (19.5)	0.0 (5.6)	** (**)	** (**)
North Central	2.6 (5.6)	17.2 (15.2)	7.8 (15.6)	0.2 (5.3)	** (**)	** (**)
South	0.5 (5.3)	11.0 (13.5)	9.7 (14.2)	0.8 (4.8)	** (**)	** (**)
West	0.3 (6.9)	** (**)	8.1 (19.7)	0.3 (6.0)	** (**)	** (**)

DRG CLUSTER: 123
DENTAL EXTRACTIONS & RESTORATIONS
DRG(S): 187

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (5.5)	2.6 (18.7)	1.7 (15.9)	0.0 (4.9)	0.0 (17.9)	0.0 (17.6)
Northeast	0.0 (8.8)	** (**)	** (**)	0.0 (8.6)	** (**)	** (**)
North Central	0.0 (11.6)	** (**)	** (**)	0.0 (10.3)	** (**)	** (**)
South	0.0 (10.4)	** (**)	** (**)	0.0 (9.0)	** (**)	** (**)
West	0.0 (16.5)	** (**)	** (**)	0.0 (12.6)	** (**)	** (**)

ORTHOPEDICS

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 138
MAJOR JOINT AND LIMB ATTACHMENT PROCEDURES
DRG(S): 209

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (2.2)	1.8 (1.6)	4.6 (1.3)	0.1 (1.5)	0.0 (1.4)	0.3 (1.5)
Northeast	1.1 (4.9)	3.3 (3.6)	5.1 (2.9)	0.0 (3.7)	0.0 (3.4)	0.2 (3.4)
North Central	1.1 (3.9)	1.9 (2.9)	3.7 (2.4)	0.0 (2.5)	0.1 (2.5)	0.4 (2.6)
South	1.8 (4.2)	1.6 (3.2)	5.4 (2.4)	0.4 (2.9)	0.0 (2.9)	0.4 (2.9)
West	0.7 (4.6)	0.4 (3.4)	3.9 (2.9)	0.0 (3.2)	0.0 (3.0)	0.1 (3.1)

DRG CLUSTER: 139
HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT
DRG(S): 210, 211, 212

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.4 (2.2)	4.0 (2.4)	6.6 (1.2)	0.1 (1.8)	0.1 (3.1)	0.8 (1.8)
Northeast	2.6 (4.7)	5.7 (4.9)	8.1 (2.5)	0.0 (4.0)	0.0 (6.2)	1.1 (3.6)
North Central	2.2 (4.3)	2.8 (4.8)	5.3 (2.5)	0.1 (3.6)	0.2 (6.1)	0.7 (3.4)
South	2.4 (3.8)	3.9 (4.2)	7.2 (2.3)	0.1 (3.1)	0.2 (5.8)	0.8 (3.3)
West	2.2 (4.7)	3.4 (5.3)	5.3 (2.9)	0.0 (3.7)	0.0 (6.9)	0.5 (4.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 140
AMPUTATIONS FOR MUSCULOSKELETAL SYSTEM & CONN. TISSUE DISORDERS
DRG(S): 213

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	5.1 (6.7)	2.7 (8.4)	4.2 (7.8)	0.0 (7.1)	0.0 (14.0)	0.0 (14.3)
Northeast	5.0 (14.0)	4.8 (19.5)	** (")	0.0 (16.3)	** (")	** (")
North Central	5.1 (13.0)	5.1 (15.3)	4.3 (14.6)	0.0 (14.3)	** (")	** (")
South	6.1 (11.7)	0.2 (15.0)	4.9 (12.7)	0.0 (11.0)	** (")	** (")
West	3.4 (15.6)	2.3 (19.1)	3.9 (17.8)	0.0 (18.6)	** (")	** (")

DRG CLUSTER: 141
BACK & NECK PROCEDURES
DRG(S): 214, 215

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (1.6)	1.6 (2.7)	2.8 (3.6)	0.0 (0.7)	0.0 (2.2)	0.4 (3.7)
Northeast	0.5 (4.0)	1.4 (6.4)	4.7 (8.4)	0.0 (1.7)	0.2 (5.4)	0.5 (8.3)
North Central	0.8 (3.1)	1.8 (5.1)	3.2 (7.0)	0.0 (1.3)	0.0 (4.0)	0.7 (7.2)
South	1.2 (2.8)	1.8 (4.8)	3.3 (7.3)	0.0 (1.2)	0.0 (4.1)	0.0 (7.5)
West	0.5 (3.2)	1.3 (5.3)	0.9 (6.7)	0.0 (1.5)	0.0 (4.2)	0.3 (6.9)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 142
BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE
DRG(S): 216

Region	With CCs			Without CCs		
	Age <65	Age 65-74	Age 75+	Age <65	Age 65-74	Age 75+
U.S.	3.3 (6.7)	3.3 (8.7)	7.4 (9.1)	0.0 (4.7)	0.0 (10.2)	0.9 (12.2)
Northeast	1.7 (14.2)	2.6 (16.1)	5.2 (18.3)	0.0 (11.5)	** (")	** (")
North Central	0.0 (12.3)	7.1 (18.5)	10.1 (19.9)	0.0 (8.9)	0.0 (19.2)	** (")
South	6.4 (12.2)	1.6 (15.6)	12.2 (17.3)	0.0 (7.8)	0.0 (18.2)	** (")
West	5.7 (15.9)	** (")	2.0 (17.7)	0.0 (10.5)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 144
LOWER EXTREM. & HUMER PROCEDURES EXCEPT HIP, FOOT, FEMUR
DRG(S): 218, 219, 220

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (2.3)	1.7 (4.3)	2.3 (4.6)	0.0 (0.9)	0.2 (3.2)	0.0 (4.2)
Northeast	0.5 (4.9)	0.0 (9.1)	3.6 (9.5)	0.0 (2.1)	0.0 (6.7)	0.0 (8.7)
North Central	0.3 (4.5)	1.8 (8.2)	1.3 (8.9)	0.0 (1.8)	0.0 (6.2)	0.0 (7.6)
South	0.5 (4.4)	2.5 (8.2)	2.6 (8.9)	0.0 (1.8)	0.6 (6.4)	0.0 (8.5)
West	1.0 (5.0)	2.0 (8.9)	1.3 (9.8)	0.0 (1.9)	0.0 (6.5)	0.0 (9.4)

DRG CLUSTER: 145
KNEE PROCEDURES
DRG(S): 221, 222

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (4.1)	0.0 (7.5)	2.0 (8.8)	0.0 (1.1)	0.0 (4.6)	0.0 (6.7)
Northeast	0.0 (8.9)	0.0 (16.1)	2.8 (15.8)	0.0 (2.2)	0.0 (9.2)	0.0 (13.4)
North Central	1.1 (8.5)	0.0 (14.0)	0.6 (17.3)	0.0 (2.2)	0.0 (8.9)	0.0 (13.5)
South	0.0 (8.0)	0.0 (14.3)	0.0 (17.9)	0.0 (2.2)	0.0 (8.5)	0.0 (12.0)
West	0.2 (7.6)	0.0 (15.8)	5.6 (20.0)	0.0 (2.1)	0.0 (10.1)	0.0 (14.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 146
MAJOR SHOULDER/ELBOW PROCEDURES OR OTHER UPPER EXTREM. PROCS. W/ CCS
DRG(S): 223

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (3.4)	0.5 (5.2)	1.4 (5.8)	0.0 (1.8)	0.0 (4.5)	0.0 (6.7)
Northeast	0.3 (7.2)	1.5 (11.0)	2.6 (12.5)	0.0 (3.9)	0.0 (10.5)	0.0 (14.4)
North Central	0.0 (6.6)	0.7 (9.5)	0.9 (11.1)	0.0 (3.4)	0.0 (8.2)	0.0 (13.1)
South	1.1 (6.5)	0.0 (10.1)	1.3 (11.2)	0.0 (3.8)	0.0 (9.2)	0.0 (13.5)
West	0.0 (6.8)	0.0 (10.9)	1.0 (11.9)	0.0 (3.6)	0.0 (8.4)	0.0 (13.0)

DRG CLUSTER: 147
SHOULDER, ELBOW, OR FOREARM EXCEPT MAJOR JOINT PROCEDURES W/O CCS
DRG(S): 224

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	-- (--)	-- (--)	-- (--)	0.0 (1.4)	0.0 (4.4)	0.0 (6.1)
Northeast	-- (--)	-- (--)	-- (--)	0.0 (3.0)	0.0 (8.9)	0.0 (12.0)
North Central	-- (--)	-- (--)	-- (--)	0.0 (2.7)	0.0 (8.5)	0.0 (12.8)
South	-- (--)	-- (--)	-- (--)	0.0 (2.6)	0.0 (9.0)	0.0 (11.2)
West	-- (--)	-- (--)	-- (--)	0.0 (2.8)	0.0 (8.6)	0.0 (13.1)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 148
FOOT PROCEDURES
DRG(S): 225

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	0.1 (4.4)	0.0 (7.3)	0.9 (8.6)	0.0 (1.5)	0.0 (3.6)	0.0 (6.1)
Northeast	0.0 (8.9)	0.0 (14.0)	0.0 (17.3)	0.0 (3.1)	0.0 (8.1)	0.0 (13.6)
North Central	0.0 (8.1)	0.0 (13.9)	1.4 (15.6)	0.0 (2.6)	0.0 (6.5)	0.0 (10.0)
South	0.1 (8.4)	0.0 (13.8)	1.3 (16.3)	0.0 (2.9)	0.0 (7.1)	0.0 (12.7)
West	0.6 (10.0)	0.0 (17.6)	** (**)	0.0 (3.3)	0.0 (7.8)	0.0 (14.4)

DRG CLUSTER: 149
SOFT TISSUE PROCEDURES
DRG(S): 226, 227

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	1.6 (3.9)	1.3 (7.1)	2.1 (9.1)	0.0 (1.5)	0.0 (4.5)	0.0 (6.9)
Northeast	1.9 (8.2)	1.1 (13.4)	0.0 (16.3)	0.0 (3.1)	0.0 (8.9)	0.0 (13.5)
North Central	2.1 (7.6)	0.3 (13.8)	6.0 (17.4)	0.0 (2.7)	0.0 (8.1)	0.0 (11.7)
South	1.1 (7.2)	0.8 (13.3)	1.9 (18.5)	0.0 (2.8)	0.0 (8.9)	0.0 (14.0)
West	1.2 (8.8)	4.3 (17.4)	** (**)	0.0 (3.3)	0.0 (11.1)	0.0 (17.8)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 150
MAJOR THUMB OR JOINT PROCEDURES, OR OTHER HAND OR WRIST PROCS. W/ CCS
DRG(S): 228

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (4.7)	0.0 (9.2)	0.0 (13.0)	0.0 (3.1)	0.0 (6.6)	0.0 (13.1)
Northeast	0.7 (10.5)	0.0 (17.8)	** (")	0.0 (7.2)	0.0 (18.5)	** (")
North Central	0.5 (8.3)	0.0 (17.7)	** (")	0.0 (5.6)	0.0 (11.0)	** (")
South	0.0 (9.2)	0.0 (18.2)	** (")	0.0 (6.4)	0.0 (14.0)	** (")
West	0.0 (9.7)	** (")	** (")	0.0 (6.1)	0.0 (12.0)	** (")

DRG CLUSTER: 151
HAND OR WRIST PROCEDURES EXCEPT MAJOR JOINT PROCEDURES W/O CCS
DRG(S): 229

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	** (")	-- (--)	-- (--)	0.0 (1.6)	0.0 (5.9)	0.0 (9.6)
Northeast	-- (--)	-- (--)	-- (--)	0.0 (3.4)	0.0 (12.2)	0.0 (18.1)
North Central	** (")	-- (--)	-- (--)	0.0 (2.9)	0.0 (10.8)	0.0 (17.9)
South	-- (--)	-- (--)	-- (--)	0.0 (3.1)	0.0 (12.1)	0.0 (18.1)
West	** (")	-- (--)	-- (--)	0.0 (3.4)	0.0 (12.7)	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 152
LOCAL EXCISION & REMOVAL OF INT. FIX. DEVICES OF HIP & FEMUR
DRG(S): 230

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (9.0)	0.0 (17.6)	2.7 (12.3)	0.1 (3.0)	0.0 (11.4)	0.0 (10.3)
Northeast	0.0 (19.2)	** (")	** (")	0.0 (6.1)	** (")	0.0 (18.5)
North Central	0.0 (17.0)	** (")	** (")	0.2 (5.7)	** (")	** (")
South	2.6 (17.4)	** (")	** (")	0.0 (6.1)	** (")	0.0 (18.5)
West	0.0 (18.7)	** (")	** (")	0.0 (6.4)	** (")	** (")

DRG CLUSTER: 153
LOCAL EXCISION & REMOVAL OF INT. FIX. DEVICES EXCEPT HIP & FEMUR
DRG(S): 231

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (4.6)	2.3 (8.6)	3.1 (11.7)	0.0 (1.6)	0.2 (5.5)	0.0 (8.2)
Northeast	0.0 (10.3)	2.0 (16.7)	** (")	0.0 (3.4)	0.0 (11.8)	0.0 (18.5)
North Central	1.7 (9.1)	0.0 (18.6)	** (")	0.0 (2.8)	0.0 (10.4)	0.0 (16.0)
South	0.0 (8.7)	2.7 (16.1)	** (")	0.0 (3.1)	0.5 (9.6)	0.0 (15.2)
West	0.0 (9.0)	4.1 (17.6)	** (")	0.0 (3.4)	0.0 (12.8)	0.0 (16.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 154
ARTHROSCOPY
DRG(S): 232

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (16.6)	** (**)	** (**)	0.1 (3.8)	0.0 (17.8)	** (**)
Northeast	** (**)	** (**)	** (**)	0.0 (6.4)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	0.5 (8.8)	** (**)	** (**)
South	** (**)	** (**)	** (**)	0.0 (7.6)	** (**)	** (**)
West	** (**)	** (**)	-- (--)	0.0 (8.3)	** (**)	** (**)

DRG CLUSTER: 155
OTHER MUSCULOSKELETAL SYSTEM & CONN. TISS. O.R. PROCEDURES
DRG(S): 233, 234

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.8 (3.7)	3.5 (6.4)	3.3 (6.2)	0.0 (1.9)	0.2 (5.5)	0.0 (6.5)
Northeast	1.3 (8.4)	7.0 (13.4)	2.5 (11.8)	0.0 (4.3)	0.8 (10.9)	0.0 (13.7)
North Central	2.3 (7.1)	4.8 (11.8)	5.6 (11.6)	0.0 (3.7)	0.0 (11.1)	0.0 (13.1)
South	2.2 (6.1)	0.0 (12.3)	0.8 (12.5)	0.0 (3.1)	0.0 (9.7)	0.0 (11.5)
West	0.7 (8.7)	2.9 (14.1)	4.5 (14.6)	0.0 (4.3)	0.0 (13.3)	0.0 (14.3)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 156
FRACTURES OF FEMUR
DRG(S): 235

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.8 (6.8)	1.7 (10.9)	10.3 (6.7)	0.0 (3.2)	0.0 (13.0)	1.4 (8.0)
Northeast	2.8 (13.9)	0.0 (20.0)	19.2 (12.8)	0.0 (7.9)	** (")	0.0 (16.9)
North Central	0.0 (13.1)	** (")	14.4 (12.6)	0.0 (5.9)	** (")	0.0 (14.4)
South	4.5 (12.7)	** (")	3.6 (11.9)	0.0 (5.4)	** (")	2.7 (14.4)
West	3.5 (15.2)	** (")	4.2 (18.7)	0.0 (6.8)	** (")	** (")

DRG CLUSTER: 157
FRACTURES OF HIP & PELVIS
DRG(S): 236

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.1 (3.5)	8.6 (4.6)	11.6 (2.4)	0.0 (3.3)	0.0 (5.7)	1.1 (3.0)
Northeast	2.3 (7.6)	8.8 (9.7)	14.1 (4.4)	0.0 (7.2)	0.0 (11.0)	0.9 (6.1)
North Central	1.8 (6.9)	8.7 (9.1)	9.4 (4.6)	0.0 (6.8)	0.0 (11.4)	0.2 (5.7)
South	2.2 (6.3)	9.8 (8.5)	13.2 (4.5)	0.0 (5.7)	0.0 (11.1)	2.1 (5.6)
West	2.4 (7.4)	5.7 (10.0)	7.8 (5.5)	0.0 (6.8)	0.0 (12.7)	0.6 (7.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 158
SPRAINS, STRAINS & DISLOCATIONS OF HIP, PELVIS & THIGH
DRG(S): 237

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (12.3)	** (")	2.6 (14.4)	0.0 (7.0)	0.0 (17.4)	0.0 (13.8)
Northeast	** (")	** (")	** (")	0.0 (15.9)	** (")	** (")
North Central	** (")	** (")	** (")	0.0 (12.8)	** (")	** (")
South	** (")	** (")	** (")	0.0 (12.5)	** (")	** (")
West	** (")	** (")	** (")	0.0 (15.5)	** (")	** (")

DRG CLUSTER: 159
OSTEOMYELITIS
DRG(S): 238

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.1 (5.0)	3.2 (8.5)	6.8 (8.1)	0.0 (4.9)	0.0 (13.3)	0.0 (12.5)
Northeast	2.7 (9.1)	4.3 (14.9)	10.0 (13.5)	0.0 (10.8)	** (")	** (")
North Central	1.0 (8.8)	0.0 (14.6)	5.3 (16.5)	0.0 (9.2)	** (")	** (")
South	0.0 (10.5)	8.1 (19.1)	6.8 (15.3)	0.0 (8.9)	** (")	** (")
West	0.0 (12.2)	** (")	** (")	0.0 (10.9)	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 160
PATH FRACTURES & MUSCULOSKELETAL & CONN. TISSUE MALIGNANCY
DRG(S): 239

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	21.1 (2.5)	14.2 (2.5)	10.3 (2.2)	4.5 (3.5)	6.3 (4.0)	2.1 (2.9)
Northeast	24.4 (5.2)	17.5 (5.1)	15.7 (4.3)	4.8 (7.7)	3.6 (8.9)	1.7 (6.1)
North Central	19.2 (4.5)	16.6 (4.9)	7.5 (4.3)	3.7 (6.8)	3.9 (7.5)	1.8 (5.7)
South	23.0 (4.4)	12.8 (4.8)	9.9 (4.0)	4.6 (5.4)	9.3 (6.9)	2.3 (5.4)
West	14.8 (6.3)	9.7 (5.4)	7.8 (4.7)	4.9 (9.7)	6.2 (9.3)	2.5 (6.4)

DRG CLUSTER: 161
CONNECTIVE TISSUE DISORDERS
DRG(S): 240, 241

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.3 (2.8)	6.1 (4.9)	6.1 (5.2)	0.1 (2.6)	0.7 (6.3)	1.4 (7.0)
Northeast	3.6 (5.8)	6.7 (10.7)	9.3 (10.3)	0.2 (5.6)	0.0 (14.9)	0.2 (13.9)
North Central	3.1 (5.1)	2.5 (9.2)	4.2 (10.1)	0.2 (5.0)	1.8 (11.3)	0.9 (12.8)
South	5.6 (5.0)	7.7 (8.2)	5.2 (9.5)	0.0 (4.5)	0.0 (10.4)	3.1 (13.0)
West	4.4 (6.6)	7.8 (12.0)	6.4 (12.4)	0.0 (6.5)	2.1 (17.3)	0.0 (17.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 162
SEPTIC ARTHRITIS
DRG(S): 242

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (7.1)	2.8 (14.5)	8.3 (12.5)	0.0 (5.0)	0.0 (16.4)	0.0 (15.2)
Northeast	1.9 (15.2)	** (")	** (")	0.0 (10.7)	** (")	** (")
North Central	0.0 (12.6)	** (")	** (")	0.0 (10.2)	** (")	** (")
South	0.1 (13.1)	** (")	** (")	0.0 (8.9)	** (")	** (")
West	5.2 (16.8)	** (")	** (")	0.0 (10.2)	** (")	** (")

DRG CLUSTER: 163
MEDICAL BACK PROBLEMS
DRG(S): 243

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (1.4)	1.2 (2.3)	1.8 (1.8)	0.0 (0.6)	0.1 (1.8)	0.2 (1.9)
Northeast	0.6 (3.1)	1.6 (4.9)	2.4 (3.8)	0.0 (1.4)	0.3 (3.9)	0.4 (4.1)
North Central	0.3 (2.5)	0.4 (4.4)	1.3 (3.6)	0.0 (1.1)	0.0 (3.4)	0.2 (3.6)
South	0.3 (2.3)	1.4 (3.9)	1.7 (3.3)	0.0 (1.0)	0.2 (3.2)	0.2 (3.5)
West	0.3 (3.3)	1.5 (5.3)	1.8 (4.2)	0.0 (1.5)	0.1 (4.4)	0.0 (4.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 164
BONE DISEASES & SPECIFIC ARTHROPATHIES
DRG(S): 244, 245

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (5.2)	0.6 (5.4)	1.9 (3.9)	0.0 (3.9)	0.0 (6.0)	0.0 (4.8)
Northeast	0.0 (12.1)	2.9 (11.6)	1.1 (7.9)	0.0 (8.5)	0.0 (11.5)	0.0 (9.7)
North Central	0.6 (9.1)	0.0 (10.2)	1.2 (7.6)	0.0 (7.2)	0.0 (11.8)	0.0 (8.9)
South	0.0 (8.6)	0.1 (9.0)	3.3 (7.0)	0.0 (6.6)	0.0 (10.6)	0.0 (8.3)
West	0.0 (15.1)	0.0 (13.8)	1.0 (9.9)	0.0 (10.5)	0.0 (15.3)	0.0 (13.2)

DRG CLUSTER: 165
NON-SPECIFIC ARTHROPATHIES
DRG(S): 246

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (13.2)	0.0 (19.9)	0.0 (13.3)	0.0 (7.2)	0.0 (16.3)	0.0 (14.4)
Northeast	** (**)	** (**)	** (**)	0.0 (16.4)	** (**)	** (**)
North Central	** (**)	** (**)	** (**)	0.0 (15.0)	** (**)	** (**)
South	** (**)	** (**)	** (**)	0.0 (11.5)	** (**)	** (**)
West	** (**)	** (**)	** (**)	0.0 (17.1)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 166
SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN. TISSUE
DRG(S): 247

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (4.3)	0.0 (7.2)	2.2 (6.5)	0.0 (2.3)	0.0 (6.2)	0.5 (6.7)
Northeast	0.0 (10.4)	0.0 (16.6)	1.1 (13.6)	0.0 (6.0)	0.0 (14.6)	0.0 (14.4)
North Central	0.5 (8.0)	0.0 (14.4)	3.9 (12.6)	0.0 (4.3)	0.0 (10.5)	1.0 (12.2)
South	0.0 (7.0)	0.0 (11.6)	2.8 (12.4)	0.0 (3.6)	0.0 (11.2)	0.0 (12.1)
West	0.0 (10.6)	0.0 (16.7)	0.0 (13.9)	0.0 (6.2)	0.0 (15.2)	1.5 (15.6)

DRG CLUSTER: 167
TENDONITIS, MYOSITIS & BURSITIS
DRG(S): 248

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.6 (4.7)	4.0 (9.1)	1.7 (8.5)	0.0 (2.9)	0.0 (8.3)	0.0 (8.9)
Northeast	1.4 (9.6)	6.8 (17.9)	2.0 (16.8)	0.0 (6.6)	** (")	0.0 (20.0)
North Central	0.5 (8.9)	4.3 (18.3)	1.7 (16.1)	0.0 (5.6)	0.0 (14.8)	0.0 (16.3)
South	0.3 (8.5)	3.3 (15.2)	0.0 (16.0)	0.0 (5.0)	0.0 (13.9)	0.0 (16.6)
West	0.0 (10.7)	** (")	** (")	0.0 (7.1)	** (")	0.0 (19.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 168
AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE
DRG(S): 249

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (10.4)	0.0 (10.4)	3.7 (7.8)	0.0 (5.6)	0.0 (7.6)	0.6 (7.0)
Northeast	** (")	** (")	5.3 (19.9)	0.0 (12.3)	0.0 (17.1)	0.0 (16.3)
North Central	** (")	** (")	0.4 (15.4)	0.0 (11.1)	0.0 (13.4)	1.9 (12.3)
South	1.4 (16.0)	0.0 (16.1)	4.9 (11.9)	0.0 (10.2)	0.0 (15.5)	0.0 (14.0)
West	** (")	** (")	2.4 (19.4)	0.0 (11.8)	0.0 (15.9)	0.0 (14.4)

DRG CLUSTER: 169
FX. SPRNS., STRNS. & DISL. OF FOREARM, HAND, FOOT
DRG(S): 250, 251, 252

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (4.8)	1.4 (8.9)	4.1 (6.5)	0.0 (2.0)	0.0 (6.9)	0.4 (6.3)
Northeast	0.0 (10.1)	1.9 (16.5)	5.4 (12.2)	0.0 (4.0)	0.0 (13.6)	0.0 (12.0)
North Central	0.6 (9.3)	0.0 (17.0)	2.7 (12.1)	0.0 (3.8)	0.0 (13.2)	1.3 (11.8)
South	0.0 (8.9)	2.4 (15.9)	5.0 (12.3)	0.0 (3.4)	0.0 (12.7)	0.0 (12.5)
West	0.0 (10.5)	** (")	1.9 (17.0)	0.0 (5.0)	0.0 (16.6)	0.0 (14.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 170
FX. SPRNS., STRNS. & DISL. OF UP ARM, LOW LEG, EXCEPT FOOT
DRG(S): 253, 254, 255

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (2.9)	0.9 (4.5)	3.1 (3.3)	0.0 (1.4)	0.0 (4.0)	0.4 (3.2)
Northeast	0.3 (6.0)	1.9 (9.3)	4.0 (6.3)	0.0 (2.9)	0.0 (7.8)	0.4 (6.3)
North Central	0.5 (5.6)	0.4 (8.5)	2.6 (6.3)	0.0 (2.7)	0.0 (7.6)	0.5 (6.3)
South	0.4 (5.1)	0.5 (8.5)	1.5 (6.4)	0.0 (2.4)	0.0 (7.2)	0.0 (6.0)
West	0.3 (6.4)	1.2 (10.5)	5.4 (7.7)	0.0 (3.4)	0.0 (9.6)	1.1 (7.3)

DRG CLUSTER: 171
OTHER DXS OF MUSCULOSKELETAL SYSTEM & CONN. TISS.
DRG(S): 256

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.3 (4.0)	1.6 (7.2)	5.1 (6.9)	0.3 (2.7)	0.0 (7.5)	0.0 (8.3)
Northeast	1.0 (9.0)	1.6 (15.5)	3.4 (13.7)	0.8 (6.2)	0.0 (16.3)	0.0 (16.7)
North Central	0.6 (6.9)	2.2 (13.2)	5.1 (12.9)	0.0 (5.0)	0.0 (15.6)	0.0 (15.1)
South	2.3 (6.8)	1.8 (13.1)	6.9 (13.3)	0.5 (4.4)	0.0 (12.9)	0.0 (15.9)
West	0.0 (11.1)	0.0 (17.1)	4.7 (16.5)	0.0 (6.5)	0.0 (16.6)	* (*)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 325
BILATERAL OR MULTIPLE MAJOR JOINT PROCEDURES OF LOWER EXTREM.
DRG(S): 471

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (9.2)	2.4 (7.8)	4.7 (8.4)	0.0 (8.1)	0.0 (8.2)	0.0 (9.8)
Northeast	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)
North Central	0.0 (13.6)	2.3 (10.9)	4.6 (12.2)	0.0 (11.1)	0.0 (11.0)	0.0 (13.7)
South	0.0 (18.3)	4.4 (15.8)	6.4 (16.4)	0.0 (15.4)	0.0 (16.1)	0.0 (18.1)
West	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)

UROLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 200
KIDNEY TRANSPLANT
DRG(S): 302

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.8 (4.7)	** (")	-- (--)	0.0 (9.7)	** (")	-- (--)
Northeast	2.8 (12.0)	** (")	-- (--)	** (")	-- (--)	-- (--)
North Central	2.9 (8.5)	** (")	-- (--)	0.0 (19.5)	-- (--)	-- (--)
South	1.3 (7.3)	** (")	-- (--)	0.0 (13.4)	** (")	-- (--)
West	0.5 (12.2)	** (")	-- (--)	** (")	** (")	-- (--)

DRG CLUSTER: 201
KIDNEY, URETER & MAJOR BLADDER PROCEDURES FOR NEOPLASM
DRG(S): 303

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.0 (4.1)	3.3 (4.2)	6.5 (4.7)	0.0 (4.6)	0.3 (6.1)	0.9 (8.5)
Northeast	2.4 (8.1)	4.3 (8.3)	3.9 (9.9)	0.0 (10.3)	0.0 (12.0)	0.0 (17.1)
North Central	1.8 (7.9)	3.6 (8.0)	8.4 (8.7)	0.0 (8.2)	0.0 (11.7)	0.0 (15.0)
South	1.2 (7.7)	2.8 (7.5)	6.6 (8.7)	0.0 (8.5)	0.7 (11.3)	2.1 (18.3)
West	2.8 (8.9)	2.6 (10.3)	6.6 (10.5)	0.0 (10.5)	0.0 (15.0)	1.7 (18.5)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 202
KIDNEY, URETER & MAJOR BLADDER PROCEDURES FOR NON-NEOPLASM
DRG(S): 304, 305

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (2.2)	3.7 (3.8)	6.3 (4.7)	0.0 (2.0)	0.5 (5.4)	0.0 (8.7)
Northeast	1.6 (4.9)	4.4 (7.7)	9.3 (8.7)	0.1 (4.6)	0.0 (11.2)	** (**)
North Central	1.8 (4.3)	2.8 (7.4)	4.4 (9.2)	0.0 (3.8)	0.0 (9.8)	0.0 (16.8)
South	1.1 (3.9)	4.6 (6.7)	5.6 (9.1)	0.0 (3.1)	1.5 (9.9)	0.0 (15.2)
West	1.3 (5.0)	2.2 (8.8)	5.2 (11.8)	0.0 (4.7)	0.0 (13.1)	0.0 (18.9)

DRG CLUSTER: 203
PROSTATECTOMY
DRG(S): 306, 307

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (6.6)	0.5 (4.6)	2.4 (3.9)	0.0 (7.4)	0.0 (5.8)	0.0 (6.1)
Northeast	0.0 (12.8)	2.0 (9.5)	1.7 (8.0)	0.0 (16.6)	0.0 (11.8)	0.0 (12.4)
North Central	0.0 (14.0)	0.0 (9.0)	2.9 (7.3)	0.0 (13.6)	0.0 (10.6)	0.0 (10.2)
South	0.0 (12.5)	0.0 (8.5)	3.6 (7.6)	0.0 (12.8)	0.0 (11.2)	0.0 (12.7)
West	0.0 (14.0)	0.0 (10.2)	0.5 (8.6)	0.0 (17.9)	0.0 (13.0)	0.0 (14.2)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 204
MINOR BLADDER PROCEDURES
DRG(S): 308, 309

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.1 (4.9)	1.5 (5.6)	4.1 (4.7)	0.0 (4.9)	0.0 (6.6)	0.6 (7.2)
Northeast	0.7 (10.7)	0.0 (13.5)	4.4 (9.4)	0.0 (12.6)	0.0 (15.2)	0.0 (15.8)
North Central	0.0 (8.7)	1.1 (10.1)	4.8 (8.7)	0.0 (9.4)	0.0 (11.2)	1.2 (13.1)
South	1.9 (8.8)	2.2 (10.4)	4.6 (9.0)	0.0 (8.4)	0.0 (12.9)	1.0 (14.0)
West	2.0 (11.7)	2.5 (11.7)	1.5 (10.7)	0.0 (10.4)	0.0 (14.2)	0.0 (15.3)

DRG CLUSTER: 205
TRANSURETHRAL PROCEDURES
DRG(S): 310, 311

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (2.3)	1.2 (2.7)	2.0 (2.4)	0.0 (1.5)	0.0 (2.6)	0.2 (2.9)
Northeast	0.0 (4.8)	2.1 (5.3)	1.8 (4.4)	0.0 (3.5)	0.2 (5.0)	0.0 (5.0)
North Central	0.4 (4.5)	1.0 (5.6)	1.8 (4.8)	0.0 (3.1)	0.0 (5.4)	0.0 (5.7)
South	0.1 (4.0)	0.8 (4.7)	2.9 (4.5)	0.0 (2.2)	0.0 (4.8)	0.1 (5.8)
West	0.4 (5.8)	0.7 (6.4)	1.2 (5.9)	0.0 (3.7)	0.0 (5.8)	0.8 (6.8)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 206
URETHRAL PROCEDURES
DRG(S): 312, 313, 314

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (5.8)	0.4 (7.8)	2.8 (7.2)	0.0 (3.8)	0.0 (8.0)	0.5 (8.7)
Northeast	0.0 (13.0)	0.0 (16.9)	4.7 (14.6)	0.0 (8.1)	0.0 (17.1)	0.0 (16.9)
North Central	0.0 (10.1)	0.0 (14.2)	1.5 (14.0)	0.0 (6.3)	0.0 (14.9)	0.0 (16.6)
South	0.0 (10.0)	0.0 (13.7)	2.7 (12.1)	0.0 (7.3)	0.0 (15.8)	0.0 (17.6)
West	3.8 (15.7)	2.3 (19.2)	2.2 (18.9)	0.0 (9.3)	0.0 (16.1)	2.8 (18.6)

DRG CLUSTER: 207
OTHER KIDNEY & URINARY TRACT O.R. PROCEDURES
DRG(S): 315

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	4.3 (2.4)	12.4 (3.4)	18.0 (3.9)	0.0 (3.9)	1.4 (7.0)	0.0 (10.2)
Northeast	6.1 (5.1)	14.3 (7.2)	22.3 (7.3)	0.0 (8.9)	3.8 (16.5)	0.0 (19.7)
North Central	4.9 (5.0)	13.4 (6.7)	19.7 (7.6)	0.0 (7.1)	0.3 (12.8)	0.0 (18.2)
South	3.8 (3.9)	10.3 (6.0)	15.4 (7.3)	0.0 (7.1)	1.2 (13.3)	** (**)
West	2.6 (5.4)	13.1 (8.0)	12.2 (9.6)	0.0 (8.6)	1.4 (14.6)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 211
KIDNEY & URINARY TRACT INFECTIONS
DRG(S): 320, 321, 322

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.9 (1.2)	3.7 (1.7)	7.2 (1.1)	0.0 (1.1)	0.5 (3.1)	1.2 (2.3)
Northeast	1.2 (2.9)	5.4 (3.8)	10.2 (2.5)	0.0 (2.5)	0.5 (6.8)	0.9 (4.8)
North Central	0.9 (2.3)	3.4 (3.4)	6.1 (2.2)	0.0 (2.2)	0.5 (6.4)	0.6 (4.8)
South	0.7 (2.1)	3.5 (2.8)	6.8 (1.8)	0.1 (1.7)	0.7 (4.9)	1.7 (3.7)
West	0.8 (3.0)	2.9 (4.2)	6.0 (2.9)	0.0 (2.7)	0.0 (7.1)	0.2 (5.9)

DRG CLUSTER: 212
URINARY STONES &/OR ESW LITHOTRIPSY
DRG(S): 323, 324

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (1.5)	0.7 (3.2)	1.0 (3.9)	0.0 (0.9)	0.0 (3.0)	0.0 (4.9)
Northeast	0.1 (3.1)	0.2 (6.6)	1.2 (7.8)	0.0 (2.0)	0.0 (6.5)	0.0 (10.9)
North Central	0.2 (2.9)	0.5 (6.1)	1.4 (7.6)	0.0 (1.7)	0.0 (5.3)	0.0 (9.0)
South	0.1 (2.6)	1.1 (5.4)	0.4 (6.9)	0.0 (1.5)	0.0 (5.3)	0.0 (8.3)
West	0.0 (4.0)	0.9 (8.3)	1.4 (10.0)	0.0 (2.4)	0.0 (7.5)	0.0 (11.6)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 213
KIDNEY & URINARY TRACT SIGNS & SYMPTOMS
DRG(S): 325, 326, 327

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.2 (4.2)	3.9 (5.5)	5.1 (4.0)	0.0 (3.7)	0.0 (7.2)	0.0 (6.6)
Northeast	2.4 (9.0)	4.8 (10.3)	5.5 (8.0)	0.0 (7.0)	0.0 (12.5)	0.0 (10.9)
North Central	0.4 (8.0)	0.7 (10.3)	5.1 (7.5)	0.0 (7.5)	0.0 (15.7)	0.0 (13.2)
South	1.4 (6.9)	5.3 (10.2)	6.0 (7.2)	0.0 (5.9)	0.0 (12.8)	0.0 (12.9)
West	0.4 (11.7)	4.7 (14.6)	1.5 (10.5)	0.0 (11.1)	0.0 (19.9)	0.0 (19.1)

DRG CLUSTER: 214
URETHRAL STRICTURE
DRG(S): 328, 329, 330

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (9.1)	0.0 (13.3)	2.0 (9.0)	0.0 (9.7)	0.0 (19.1)	0.0 (16.9)
Northeast	** (**)	** (**)	1.2 (17.1)	** (**)	** (**)	** (**)
North Central	0.0 (15.2)	** (**)	0.5 (15.3)	0.0 (17.4)	** (**)	** (**)
South	0.0 (14.8)	** (**)	4.4 (17.1)	0.0 (15.5)	** (**)	** (**)
West	** (**)	** (**)	** (**)	** (**)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 215
OTHER KIDNEY & URINARY TRACT DXS
DRG(S): 331, 332, 333

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.1 (2.0)	4.6 (3.2)	7.2 (3.0)	0.0 (2.3)	0.5 (5.5)	3.2 (6.2)
Northeast	2.9 (4.1)	5.1 (6.6)	7.7 (6.1)	0.1 (4.6)	1.0 (10.3)	2.9 (12.0)
North Central	1.2 (3.8)	2.9 (6.5)	7.6 (5.6)	0.0 (4.6)	0.8 (10.6)	0.8 (11.4)
South	2.6 (3.5)	5.8 (5.6)	7.7 (5.4)	0.0 (3.7)	0.0 (10.3)	6.4 (11.2)
West	1.4 (4.7)	3.8 (7.9)	4.9 (7.6)	0.0 (5.7)	0.0 (14.0)	0.0 (16.6)

DRG CLUSTER: 216
MAJOR MALE PELVIC PROCEDURES
DRG(S): 334, 335

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (5.2)	1.6 (3.8)	3.9 (5.2)	0.0 (5.2)	0.1 (4.5)	0.4 (7.9)
Northeast	0.0 (12.0)	0.6 (8.7)	3.6 (9.7)	0.0 (13.7)	0.0 (10.6)	0.0 (17.3)
North Central	0.0 (10.7)	2.1 (8.8)	6.3 (12.5)	0.0 (10.5)	0.3 (8.8)	0.0 (19.1)
South	0.5 (9.9)	2.3 (6.9)	4.6 (9.6)	0.0 (8.9)	0.0 (9.0)	0.0 (14.9)
West	0.0 (9.3)	1.1 (6.5)	1.5 (10.4)	0.0 (10.1)	0.2 (8.0)	1.3 (13.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 217
TRANSURETHRAL PROSTATECTOMY
DRG(S): 336, 337

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (1.8)	0.4 (1.2)	1.2 (1.2)	0.0 (1.9)	0.0 (1.5)	0.1 (1.9)
Northeast	0.7 (3.9)	0.7 (2.7)	1.5 (2.6)	0.0 (4.0)	0.0 (3.0)	0.0 (3.7)
North Central	0.1 (3.7)	0.4 (2.5)	1.4 (2.5)	0.0 (3.5)	0.0 (2.8)	0.1 (3.4)
South	0.1 (3.3)	0.2 (2.2)	1.0 (2.2)	0.1 (3.7)	0.0 (3.1)	0.1 (3.7)
West	0.0 (3.8)	0.3 (2.6)	0.7 (2.8)	0.0 (4.2)	0.0 (3.3)	0.0 (4.2)

DRG CLUSTER: 218
TESTES PROCEDURES FOR MALIGNANCY
DRG(S): 338

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (8.3)	2.8 (5.7)	2.4 (5.2)	0.0 (5.3)	1.0 (8.7)	0.0 (7.5)
Northeast	0.0 (17.0)	1.3 (11.0)	3.9 (9.7)	0.0 (10.1)	3.6 (16.7)	0.0 (13.5)
North Central	1.6 (15.2)	2.2 (11.2)	2.3 (10.7)	0.0 (10.4)	0.0 (16.5)	0.0 (15.4)
South	0.0 (16.3)	5.0 (10.8)	2.5 (9.8)	0.0 (10.7)	0.0 (16.3)	0.0 (14.5)
West	0.0 (18.2)	2.1 (13.1)	0.0 (12.1)	0.0 (11.3)	** (**)	0.0 (17.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 219
TESTES PROCEDURES FOR NON-MALIGNANCY
DRG(S): 339, 340

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (6.2)	0.7 (10.5)	0.8 (11.2)	0.0 (1.9)	0.0 (6.8)	0.0 (9.8)
Northeast	0.0 (11.7)	0.0 (18.3)	** (")	0.0 (3.5)	0.0 (12.5)	0.0 (16.5)
North Central	0.0 (12.2)	2.3 (19.9)	2.4 (18.6)	0.0 (3.9)	0.0 (11.7)	0.0 (19.1)
South	0.0 (11.4)	0.0 (18.3)	** (")	0.0 (3.5)	0.0 (14.6)	** (")
West	0.0 (14.9)	** (")	** (")	0.0 (4.7)	0.0 (17.8)	** (")

DRG CLUSTER: 220
PENIS PROCEDURES
DRG(S): 341

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (4.4)	1.2 (4.8)	1.7 (5.3)	0.0 (2.8)	0.0 (4.6)	0.0 (7.0)
Northeast	0.0 (11.1)	0.9 (11.1)	2.9 (11.3)	0.0 (6.4)	0.0 (9.8)	0.0 (13.8)
North Central	0.0 (7.8)	0.0 (10.2)	4.1 (11.3)	0.0 (5.3)	0.0 (9.3)	0.0 (14.8)
South	0.4 (7.8)	2.5 (8.0)	0.5 (8.6)	0.0 (5.0)	0.0 (8.2)	0.0 (12.8)
West	0.7 (10.1)	0.0 (10.2)	0.0 (12.2)	0.0 (6.0)	0.0 (9.6)	0.0 (15.0)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 222
OTHER MALE REPRO. SYSTEM O.R. PROCEDURES FOR MALIGNANCY
DRG(S): 344

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (12.5)	3.8 (9.5)	7.0 (10.3)	0.9 (12.5)	0.0 (11.6)	0.0 (17.1)
Northeast	** (")	** (")	** (")	** (")	** (")	** (")
North Central	** (")	3.7 (17.0)	6.9 (19.5)	** (")	** (")	** (")
South	** (")	4.6 (19.4)	7.3 (18.3)	** (")	** (")	** (")
West	** (")	2.4 (17.8)	** (")	** (")	** (")	** (")

DRG CLUSTER: 223
OTHER MALE REPRO. SYSTEM O.R. PROCEDURES EXCEPT FOR MALIGNANCY
DRG(S): 345

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.1 (11.5)	1.0 (10.3)	0.0 (10.7)	0.0 (13.5)	0.0 (20.0)	** (")
Northeast	** (")	1.4 (17.9)	** (")	** (")	** (")	** (")
North Central	** (")	** (")	0.0 (19.2)	** (")	** (")	** (")
South	** (")	** (")	0.0 (19.7)	** (")	** (")	** (")
West	** (")	** (")	** (")	** (")	** (")	** (")

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 227
STERILIZATION, MALE
DRG(S): 351

Region	With CCs			Without CCs		
	Age			Age		
	<65	65-74	75+	<65	65-74	75+
U.S.	** (**)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
Northeast	** (**)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
North Central	-- (--)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
South	-- (--)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
West	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)

OB/GYNECOLOGY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 229
PELVIC EVISCERATION, RADICAL HYSTERECTOMY & RADICAL VULVECTOMY
DRG(S): 353

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (8.1)	4.7 (15.6)	13.9 (19.5)	0.0 (7.1)	0.0 (18.7)	** (")
Northeast	0.0 (15.4)	** (")	** (")	0.0 (15.4)	** (")	** (")
North Central	0.0 (14.4)	** (")	** (")	0.0 (12.8)	** (")	** (")
South	0.0 (17.1)	** (")	** (")	0.0 (12.3)	** (")	** (")
West	0.0 (19.2)	** (")	** (")	0.0 (18.9)	** (")	** (")

DRG CLUSTER: 230
UTERINE & ADNEXA PROCEDURES FOR NON-OVARIAN/ADNEXAL MALIGNANCY
DRG(S): 354, 355

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.8 (4.0)	0.6 (5.0)	1.8 (6.2)	0.0 (2.2)	0.0 (4.5)	0.0 (7.3)
Northeast	0.6 (7.8)	2.1 (11.4)	2.8 (12.7)	0.0 (5.0)	0.0 (9.4)	0.0 (14.6)
North Central	0.4 (7.4)	0.0 (9.3)	4.9 (12.1)	0.0 (4.1)	0.0 (8.6)	0.0 (14.1)
South	1.8 (7.6)	0.0 (9.6)	0.0 (11.3)	0.0 (3.8)	0.0 (8.5)	0.0 (14.3)
West	0.0 (9.0)	0.8 (10.4)	0.0 (13.8)	0.2 (4.8)	0.0 (9.5)	0.0 (15.2)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 231
FEMALE REPRO. SYSTEM FOR RECONSTRUCTIVE PROCEDURES
DRG(S): 356

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (3.5)	0.0 (4.7)	0.5 (6.3)	0.0 (1.6)	0.0 (2.7)	0.0 (4.3)
Northeast	0.0 (8.7)	0.0 (12.2)	0.0 (16.0)	0.0 (4.1)	0.0 (6.9)	0.0 (9.7)
North Central	0.0 (6.8)	0.0 (9.3)	1.8 (11.9)	0.0 (3.1)	0.0 (5.3)	0.0 (8.0)
South	0.0 (6.2)	0.0 (7.9)	0.0 (11.0)	0.0 (2.6)	0.0 (4.8)	0.0 (8.2)
West	0.0 (7.1)	0.0 (9.6)	0.0 (12.5)	0.0 (3.1)	0.0 (5.4)	0.0 (8.6)

DRG CLUSTER: 232
UTERINE & ADNEXA PROCEDURES FOR OVARIAN OR ADNEXAL MALIGNANCY
DRG(S): 357

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.9 (4.2)	4.5 (5.6)	10.2 (7.7)	0.0 (4.6)	0.0 (10.6)	0.0 (14.6)
Northeast	3.9 (8.5)	3.9 (12.0)	19.0 (16.9)	0.0 (8.7)	** (**)	** (**)
North Central	3.3 (7.8)	4.7 (10.6)	6.9 (14.6)	0.0 (8.9)	** (**)	** (**)
South	1.9 (8.3)	6.9 (10.6)	10.3 (13.5)	0.0 (8.5)	0.0 (17.8)	** (**)
West	2.5 (8.8)	1.0 (12.0)	5.1 (18.5)	0.0 (11.2)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 233
UTERINE & ADNEXA PROCEDURES FOR NON-MALIGNANCY
DRG(S): 358, 359

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (1.0)	0.4 (3.5)	1.9 (4.8)	0.0 (0.5)	0.0 (2.4)	0.0 (4.0)
Northeast	0.1 (2.2)	1.1 (7.7)	3.7 (9.6)	0.0 (1.1)	0.0 (4.8)	0.0 (8.1)
North Central	0.1 (1.9)	0.0 (7.2)	2.5 (8.9)	0.0 (0.9)	0.0 (4.5)	0.0 (8.1)
South	0.1 (1.8)	0.2 (6.1)	0.8 (8.5)	0.0 (0.8)	0.1 (4.3)	0.0 (7.2)
West	0.0 (2.0)	0.4 (7.7)	0.0 (12.4)	0.0 (1.0)	0.0 (5.4)	0.0 (8.7)

DRG CLUSTER: 234
VAGINA, CERVIX & VULVA PROCEDURES
DRG(S): 360

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.9 (5.5)	2.2 (11.5)	5.3 (9.5)	0.0 (2.9)	0.0 (8.8)	0.0 (8.9)
Northeast	4.4 (10.9)	0.0 (20.0)	9.3 (17.8)	0.0 (5.2)	0.0 (16.5)	0.0 (16.0)
North Central	1.7 (10.9)	** (**)	2.1 (17.3)	0.0 (6.3)	** (**)	0.0 (17.9)
South	3.8 (9.7)	** (**)	5.6 (18.1)	0.0 (4.8)	0.0 (14.8)	0.0 (16.1)
West	0.0 (13.8)	** (**)	** (**)	0.0 (8.1)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 235
LAPAROSCOPY & INCISIONAL TUBAL INTERRUPTION
DRG(S): 361

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (4.7)	** (**)	** (**)	0.0 (1.8)	** (**)	** (**)
Northeast	0.0 (9.7)	** (**)	** (**)	0.0 (3.1)	** (**)	** (**)
North Central	0.5 (8.5)	** (**)	** (**)	0.0 (4.1)	** (**)	-- (--)
South	0.0 (9.0)	** (**)	** (**)	0.0 (3.4)	** (**)	** (**)
West	0.0 (10.5)	** (**)	-- (--)	0.0 (4.6)	-- (--)	** (**)

DRG CLUSTER: 236
ENDOSCOPIC TUBAL INTERRUPTION
DRG(S): 362

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (18.1)	-- (--)	-- (--)	0.0 (9.2)	-- (--)	-- (--)
Northeast	** (**)	-- (--)	-- (--)	0.0 (13.5)	-- (--)	-- (--)
North Central	** (**)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)
South	** (**)	-- (--)	-- (--)	0.0 (18.2)	-- (--)	-- (--)
West	** (**)	-- (--)	-- (--)	** (**)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 237
D&C, CONIZATION & RADIO-IMPLANT FOR MALIGNANCY
DRG(S): 363

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	3.4 (8.5)	3.6 (9.8)	5.8 (11.0)	0.0 (4.5)	0.0 (9.3)	0.9 (10.2)
Northeast	3.6 (18.6)	9.2 (16.8)	** (**)	0.0 (7.5)	** (**)	** (**)
North Central	0.0 (15.8)	2.0 (19.9)	0.8 (19.5)	0.0 (10.0)	0.0 (17.1)	0.0 (20.0)
South	7.0 (13.9)	0.0 (16.9)	** (**)	0.0 (7.9)	0.0 (15.2)	0.0 (15.9)
West	** (**)	** (**)	** (**)	0.0 (13.8)	** (**)	** (**)

DRG CLUSTER: 238
D&C, CONIZATION EXCEPT FOR MALIGNANCY
DRG(S): 364

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (3.6)	0.0 (11.3)	0.8 (11.6)	0.0 (2.3)	0.0 (9.8)	0.0 (10.6)
Northeast	0.0 (6.6)	** (**)	** (**)	0.0 (3.9)	0.0 (16.6)	0.0 (17.2)
North Central	0.0 (7.5)	** (**)	** (**)	0.0 (5.6)	** (**)	** (**)
South	0.0 (6.0)	0.0 (16.8)	0.0 (17.9)	0.0 (3.8)	0.0 (16.5)	0.0 (17.6)
West	0.0 (10.1)	** (**)	** (**)	0.0 (7.0)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 239
OTHER FEMALE REPRO. SYSTEM O.R. PROCEDURES
DRG(S): 365

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.4 (5.0)	11.4 (9.2)	14.5 (12.0)	0.0 (3.4)	0.0 (12.9)	0.0 (19.5)
Northeast	1.5 (12.2)	** (**)	** (**)	0.0 (7.7)	** (**)	** (**)
North Central	3.2 (9.1)	7.9 (16.3)	** (**)	0.0 (7.0)	** (**)	** (**)
South	0.7 (8.7)	11.8 (16.7)	** (**)	0.0 (5.9)	** (**)	** (**)
West	0.3 (11.0)	** (**)	** (**)	0.0 (7.2)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 241
INFECTIONS, FEMALE REPRO. SYSTEM
DRG(S): 368

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (2.5)	** (**)	0.0 (17.9)	0.0 (1.3)	** (**)	** (**)
Northeast	0.3 (5.8)	-- (--)	** (**)	0.0 (2.9)	** (**)	** (**)
North Central	0.0 (4.7)	** (**)	** (**)	0.0 (2.7)	** (**)	** (**)
South	0.2 (4.3)	** (**)	** (**)	0.0 (2.2)	** (**)	** (**)
West	0.0 (6.3)	** (**)	** (**)	0.0 (3.2)	** (**)	** (**)

DRG CLUSTER: 242
MENSTRUAL & OTHER FEMALE REPRO. SYSTEM DISORDERS
DRG(S): 369

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (3.4)	1.1 (13.4)	5.1 (11.9)	0.0 (1.8)	0.0 (15.5)	0.0 (15.0)
Northeast	0.0 (7.1)	** (**)	** (**)	0.0 (3.5)	** (**)	** (**)
North Central	0.0 (6.7)	** (**)	** (**)	0.0 (3.7)	** (**)	** (**)
South	0.0 (5.7)	0.0 (19.5)	2.9 (20.0)	0.0 (3.0)	** (**)	** (**)
West	1.1 (8.5)	** (**)	** (**)	0.0 (4.7)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 243
CESAREAN SECTION
DRG(S): 370, 371

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (0.8)	-- (--)	-- (--)	0.0 (0.4)	-- (--)	-- (--)
Northeast	0.0 (1.6)	-- (--)	-- (--)	0.0 (0.8)	-- (--)	-- (--)
North Central	0.2 (1.6)	-- (--)	-- (--)	0.0 (0.8)	-- (--)	-- (--)
South	0.1 (1.6)	-- (--)	-- (--)	0.0 (0.7)	-- (--)	-- (--)
West	0.0 (1.7)	-- (--)	-- (--)	0.0 (0.9)	-- (--)	-- (--)

DRG CLUSTER: 244
VAGINAL DELIVERY W/ COMPLICATING DXS
DRG(S): 372

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (1.3)	-- (--)	-- (--)	0.0 (0.9)	-- (--)	-- (--)
Northeast	0.0 (2.6)	-- (--)	-- (--)	0.0 (1.9)	-- (--)	-- (--)
North Central	0.0 (2.7)	-- (--)	-- (--)	0.0 (1.7)	-- (--)	-- (--)
South	0.0 (2.5)	-- (--)	-- (--)	0.0 (1.7)	-- (--)	-- (--)
West	0.0 (2.7)	-- (--)	-- (--)	0.0 (1.9)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 245
VAGINAL DELIVERY W/O COMPLICATING DXS
DRG(S): 373

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (1.1)	-- (--)	-- (--)	0.0 (0.2)	-- (--)	-- (--)
Northeast	0.0 (2.4)	-- (--)	-- (--)	0.0 (0.5)	-- (--)	-- (--)
North Central	0.0 (2.1)	-- (--)	-- (--)	0.0 (0.4)	-- (--)	-- (--)
South	0.0 (2.0)	-- (--)	-- (--)	0.0 (0.4)	-- (--)	-- (--)
West	0.1 (2.1)	-- (--)	-- (--)	0.0 (0.5)	-- (--)	-- (--)

DRG CLUSTER: 246
VAGINAL DELIVERY W/ STERILIZATION &/OR D&C
DRG(S): 374

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.7)	-- (--)	-- (--)	0.0 (0.8)	-- (--)	-- (--)
Northeast	0.0 (7.0)	-- (--)	-- (--)	0.0 (2.1)	-- (--)	-- (--)
North Central	0.0 (5.4)	-- (--)	-- (--)	0.0 (1.6)	-- (--)	-- (--)
South	0.0 (4.8)	-- (--)	-- (--)	0.0 (1.3)	-- (--)	-- (--)
West	0.0 (5.1)	-- (--)	-- (--)	0.0 (1.6)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 247
VAGINAL DELIVERY W/O O.R. PROCEDURES EXCEPT STERIL. &/OR D&C
DRG(S): 375

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.7 (10.9)	-- (--)	-- (--)	0.0 (6.9)	-- (--)	-- (--)
Northeast	** (")	-- (--)	-- (--)	0.0 (18.5)	-- (--)	-- (--)
North Central	1.9 (18.2)	-- (--)	-- (--)	0.0 (11.4)	-- (--)	-- (--)
South	** (")	-- (--)	-- (--)	0.0 (13.3)	-- (--)	-- (--)
West	** (")	-- (--)	-- (--)	0.0 (14.8)	-- (--)	-- (--)

DRG CLUSTER: 248
POSTPARTUM & POSTABORTION DXS W/O O.R. PROCEDURES
DRG(S): 376

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.2 (3.9)	-- (--)	-- (--)	0.0 (2.2)	-- (--)	-- (--)
Northeast	0.0 (9.5)	-- (--)	-- (--)	0.0 (4.6)	-- (--)	-- (--)
North Central	0.3 (6.9)	-- (--)	-- (--)	0.0 (4.2)	-- (--)	-- (--)
South	0.0 (8.2)	-- (--)	-- (--)	0.0 (4.0)	-- (--)	-- (--)
West	0.4 (7.5)	-- (--)	-- (--)	0.0 (4.6)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 249
POSTPARTUM & POSTABORTION DXS W/ O.R. PROCEDURES
DRG(S): 377

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (5.3)	-- (--)	-- (--)	0.0 (4.0)	-- (--)	-- (--)
Northeast	0.0 (12.0)	-- (--)	-- (--)	0.0 (7.8)	-- (--)	-- (--)
North Central	0.0 (10.1)	-- (--)	-- (--)	0.0 (8.0)	-- (--)	-- (--)
South	0.0 (10.3)	-- (--)	-- (--)	0.0 (7.8)	-- (--)	-- (--)
West	0.0 (10.7)	-- (--)	-- (--)	0.0 (8.5)	-- (--)	-- (--)

DRG CLUSTER: 250
ECTOPIC PREGNANCY
DRG(S): 378

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.4)	-- (--)	-- (--)	0.0 (1.5)	-- (--)	-- (--)
Northeast	0.0 (5.0)	-- (--)	-- (--)	0.0 (3.1)	-- (--)	-- (--)
North Central	0.0 (5.0)	-- (--)	-- (--)	0.0 (3.0)	-- (--)	-- (--)
South	0.0 (4.7)	-- (--)	-- (--)	0.0 (2.8)	-- (--)	-- (--)
West	0.0 (4.6)	-- (--)	-- (--)	0.0 (3.0)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 251
THREATENED ABORTION
DRG(S): 379

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.2)	-- (--)	-- (--)	0.0 (1.1)	-- (--)	-- (--)
Northeast	0.0 (4.6)	-- (--)	-- (--)	0.0 (2.3)	-- (--)	-- (--)
North Central	0.0 (4.0)	-- (--)	-- (--)	0.0 (2.1)	-- (--)	-- (--)
South	0.0 (3.9)	-- (--)	-- (--)	0.0 (2.0)	-- (--)	-- (--)
West	0.0 (4.8)	-- (--)	-- (--)	0.0 (2.4)	-- (--)	-- (--)

DRG CLUSTER: 252
ABORTION W/O D&C
DRG(S): 380

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (6.8)	-- (--)	-- (--)	0.0 (2.4)	-- (--)	-- (--)
Northeast	0.0 (14.7)	-- (--)	-- (--)	0.0 (4.4)	-- (--)	-- (--)
North Central	0.0 (12.2)	-- (--)	-- (--)	0.0 (4.9)	-- (--)	-- (--)
South	0.0 (12.3)	-- (--)	-- (--)	0.0 (4.5)	-- (--)	-- (--)
West	0.0 (15.9)	-- (--)	-- (--)	0.0 (6.4)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 253
ABORTION W/ D&C, ASPIRATION CURETTAGE, OR HYSTEROTOMY
DRG(S): 381

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (3.4)	-- (--)	-- (--)	0.0 (1.1)	-- (--)	-- (--)
Northeast	0.0 (6.6)	-- (--)	-- (--)	0.0 (1.9)	-- (--)	-- (--)
North Central	0.0 (6.6)	-- (--)	-- (--)	0.0 (2.6)	-- (--)	-- (--)
South	0.0 (6.3)	-- (--)	-- (--)	0.0 (2.1)	-- (--)	-- (--)
West	0.0 (8.2)	-- (--)	-- (--)	0.0 (2.9)	-- (--)	-- (--)

DRG CLUSTER: 254
FALSE LABOR
DRG(S): 382

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (6.3)	-- (--)	-- (--)	0.0 (1.9)	-- (--)	-- (--)
Northeast	0.0 (12.3)	-- (--)	-- (--)	0.0 (3.7)	-- (--)	-- (--)
North Central	0.0 (11.4)	-- (--)	-- (--)	0.0 (3.6)	-- (--)	-- (--)
South	0.0 (12.2)	-- (--)	-- (--)	0.0 (3.7)	-- (--)	-- (--)
West	0.0 (15.3)	-- (--)	-- (--)	0.0 (4.7)	-- (--)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 255
OTHER ANTEPARTUM DXS W/ MEDICAL COMPLICATIONS
DRG(S): 383

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (1.2)	-- (--)	-- (--)	0.0 (1.0)	-- (--)	-- (--)
Northeast	0.0 (2.5)	-- (--)	-- (--)	0.0 (2.0)	-- (--)	-- (--)
North Central	0.0 (2.2)	-- (--)	-- (--)	0.0 (1.9)	-- (--)	-- (--)
South	0.0 (2.3)	-- (--)	-- (--)	0.0 (1.7)	-- (--)	-- (--)
West	0.0 (2.8)	-- (--)	-- (--)	0.0 (2.7)	-- (--)	-- (--)

DRG CLUSTER: 256
OTHER ANTEPARTUM DXS W/O MEDICAL COMPLICATIONS
DRG(S): 384

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (3.8)	-- (--)	-- (--)	0.0 (1.4)	-- (--)	-- (--)
Northeast	0.0 (8.1)	-- (--)	-- (--)	0.0 (2.7)	-- (--)	-- (--)
North Central	0.0 (7.7)	-- (--)	-- (--)	0.0 (2.6)	-- (--)	-- (--)
South	0.0 (6.9)	-- (--)	-- (--)	0.0 (2.7)	-- (--)	-- (--)
West	0.0 (8.3)	-- (--)	-- (--)	0.0 (3.4)	-- (--)	-- (--)

PSYCHIATRY

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 288
ACUTE ADJUST. REACT. & DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION
DRG(S): 425

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.5 (3.1)	2.4 (5.4)	3.3 (4.4)	0.0 (2.0)	0.2 (6.2)	0.2 (6.2)
Northeast	0.9 (8.0)	0.0 (13.3)	3.6 (9.9)	0.0 (5.2)	0.0 (15.6)	0.0 (16.3)
North Central	0.8 (5.7)	1.4 (10.9)	3.0 (8.1)	0.0 (3.6)	0.7 (12.0)	0.8 (11.4)
South	0.3 (5.1)	3.2 (8.2)	3.6 (7.4)	0.0 (3.2)	0.0 (9.7)	0.0 (10.6)
West	0.5 (7.6)	3.4 (13.8)	2.2 (10.5)	0.0 (4.9)	0.4 (14.8)	0.0 (13.5)

DRG CLUSTER: 289
DEPRESSIVE NEUROSES
DRG(S): 426

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (1.9)	0.0 (6.1)	1.3 (6.6)	0.0 (1.2)	0.0 (5.4)	0.0 (6.4)
Northeast	0.0 (4.7)	0.0 (16.7)	0.0 (17.9)	0.0 (3.2)	0.0 (14.3)	0.0 (15.3)
North Central	0.1 (3.4)	0.0 (10.7)	0.8 (10.9)	0.0 (2.1)	0.0 (9.6)	0.0 (10.8)
South	0.0 (3.2)	0.0 (9.7)	1.8 (10.8)	0.0 (1.9)	0.0 (7.9)	0.0 (10.6)
West	0.2 (4.9)	0.0 (16.3)	2.7 (19.2)	0.0 (3.2)	0.0 (17.4)	0.0 (19.4)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 290
NEUROSES EXCEPT DEPRESSIVE
DRG(S): 427

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.1 (3.0)	1.0 (12.2)	1.4 (14.6)	0.0 (1.7)	0.0 (11.5)	0.0 (12.6)
Northeast	0.0 (6.5)	** (**)	** (**)	0.0 (4.1)	** (**)	** (**)
North Central	0.0 (5.4)	** (**)	** (**)	0.0 (3.0)	** (**)	** (**)
South	0.2 (5.6)	** (**)	** (**)	0.0 (2.9)	0.0 (20.0)	0.0 (19.5)
West	0.0 (6.9)	** (**)	** (**)	0.0 (4.8)	** (**)	** (**)

DRG CLUSTER: 291
DISORDERS OF PERSONALITY & IMPULSE CONTROL
DRG(S): 428

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.3 (4.1)	** (**)	** (**)	0.0 (2.7)	** (**)	** (**)
Northeast	0.0 (10.0)	** (**)	** (**)	0.0 (6.8)	** (**)	** (**)
North Central	0.9 (7.0)	** (**)	** (**)	0.0 (4.7)	** (**)	** (**)
South	0.1 (7.2)	** (**)	** (**)	0.0 (4.6)	** (**)	** (**)
West	0.2 (9.4)	** (**)	** (**)	0.0 (6.7)	** (**)	-- (--)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 292
ORGANIC DISTURBANCES & MENTAL RETARDATION
DRG(S): 429

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	2.9 (3.9)	3.1 (4.2)	2.8 (2.5)	0.3 (3.7)	0.3 (4.5)	0.6 (2.8)
Northeast	2.4 (8.7)	2.2 (9.2)	6.2 (5.2)	1.4 (8.8)	1.0 (10.5)	0.7 (6.4)
North Central	1.7 (7.1)	1.5 (7.8)	1.8 (4.6)	0.0 (6.6)	0.0 (8.5)	0.2 (5.0)
South	4.0 (6.6)	5.1 (7.2)	2.0 (4.2)	0.0 (6.0)	0.0 (7.1)	1.1 (4.8)
West	1.9 (11.1)	1.6 (11.0)	1.7 (6.4)	0.8 (10.2)	0.9 (11.6)	0.0 (7.5)

DRG CLUSTER: 293
PSYCHOSES
DRG(S): 430

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (1.1)	1.2 (2.4)	2.6 (2.6)	0.0 (0.6)	0.0 (2.0)	0.1 (2.5)
Northeast	0.4 (2.4)	0.6 (4.7)	2.8 (4.7)	0.0 (1.4)	0.0 (3.9)	0.0 (4.7)
North Central	0.2 (1.8)	1.5 (4.4)	2.1 (5.0)	0.0 (1.1)	0.0 (3.6)	0.0 (4.5)
South	0.5 (2.0)	1.1 (4.4)	2.6 (4.8)	0.0 (1.1)	0.0 (3.6)	0.2 (4.6)
West	0.7 (2.6)	2.3 (6.5)	3.2 (7.0)	0.0 (1.6)	0.0 (5.6)	0.3 (6.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 294
CHILDHOOD MENTAL DISORDERS
DRG(S): 431

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (5.3)	-- (--)	-- (--)	0.0 (2.7)	** (**)	-- (--)
Northeast	0.0 (14.6)	-- (--)	-- (--)	0.0 (6.2)	** (**)	-- (--)
North Central	0.0 (9.0)	-- (--)	-- (--)	0.0 (4.8)	** (**)	-- (--)
South	0.0 (8.9)	-- (--)	-- (--)	0.0 (4.4)	-- (--)	-- (--)
West	0.0 (13.2)	-- (--)	-- (--)	0.0 (7.8)	-- (--)	-- (--)

DRG CLUSTER: 295
OTHER DXS OF MENTAL DISORDERS
DRG(S): 432

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	1.1 (7.4)	** (**)	** (**)	0.0 (4.1)	** (**)	** (**)
Northeast	** (**)	** (**)	** (**)	0.0 (15.3)	** (**)	** (**)
North Central	1.1 (12.1)	** (**)	** (**)	0.0 (7.4)	** (**)	** (**)
South	0.0 (13.6)	** (**)	** (**)	0.0 (7.2)	** (**)	** (**)
West	0.0 (16.5)	** (**)	** (**)	0.0 (7.7)	** (**)	** (**)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 296
ALCOHOL/DRUG USE & INDUCED ORGANIC MENTAL DISORDERS, LEFT AMA
DRG(S): 433

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (1.9)	0.0 (10.9)	** (")	0.0 (2.3)	0.0 (14.7)	** (")
Northeast	0.0 (3.4)	** (")	** (")	0.0 (6.1)	** (")	** (")
North Central	0.0 (3.3)	** (")	** (")	0.0 (3.7)	** (")	** (")
South	0.0 (3.9)	0.0 (18.7)	** (")	0.0 (3.9)	** (")	** (")
West	0.0 (5.2)	** (")	** (")	0.0 (6.7)	** (")	** (")

DRG CLUSTER: 297
ALCOHOL/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPTOM TREATMENT
DRG(S): 434, 435

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.4 (0.9)	1.4 (3.2)	2.2 (4.7)	0.0 (1.1)	0.0 (5.2)	0.0 (7.7)
Northeast	0.3 (2.1)	2.6 (7.7)	3.2 (10.3)	0.0 (3.2)	0.0 (13.7)	0.0 (18.6)
North Central	0.3 (1.5)	2.3 (6.6)	3.0 (9.8)	0.0 (1.6)	0.0 (9.8)	0.0 (13.9)
South	0.5 (1.9)	1.0 (5.5)	1.5 (7.8)	0.0 (1.9)	0.0 (8.2)	0.0 (13.2)
West	0.4 (2.3)	0.3 (6.5)	1.7 (10.8)	0.0 (3.2)	0.0 (12.8)	0.0 (17.7)

RISK-ADJUSTED EXPECTED DEATH RATES

% DIED
(% ERROR)

DRG CLUSTER: 299
ALCOHOL/DRUG DEPENDENCE W/ REHAB. THERAPY
DRG(S): 436

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (2.0)	0.8 (8.4)	0.0 (19.9)	0.0 (1.9)	0.0 (11.8)	** (")
Northeast	0.0 (3.8)	7.2 (18.7)	** (")	0.0 (4.8)	** (")	** (")
North Central	0.0 (2.9)	0.0 (13.1)	** (")	0.0 (2.6)	0.0 (19.2)	** (")
South	0.0 (5.0)	0.0 (16.9)	** (")	0.0 (4.5)	** (")	** (")
West	0.0 (6.1)	** (")	** (")	0.0 (6.0)	** (")	** (")

DRG CLUSTER: 300
ALCOHOL/DRUG DEPENDENCE, COMBINED REHAB. & DETOX. THERAPY
DRG(S): 437

Region	With CCs Age <65	With CCs Age 65-74	With CCs Age 75+	Without CCs Age <65	Without CCs Age 65-74	Without CCs Age 75+
U.S.	0.0 (1.4)	0.5 (5.7)	0.0 (11.7)	0.0 (1.7)	0.0 (8.6)	0.0 (18.3)
Northeast	0.0 (2.6)	0.0 (13.2)	** (")	0.0 (3.9)	0.0 (19.7)	** (")
North Central	0.0 (2.5)	0.0 (10.5)	0.0 (20.0)	0.0 (2.9)	0.0 (18.2)	** (")
South	0.0 (3.3)	0.9 (10.6)	** (")	0.0 (3.1)	0.0 (14.0)	** (")
West	0.0 (3.2)	1.0 (12.3)	** (")	0.0 (4.3)	0.0 (18.6)	** (")

Appendices

Appendix 1

CALCULATION OF PROGRAM INTENSITY INDEX

The Program Intensity Index (Ip) of Phillip and Hai (1976) is used to place hospitals in one of three levels of teaching status. The formula is presented below.

$$Ip = 9.9\,(JCA) + 14.0\,(CP) + 28.0\,(RES) + 14.7\,(MS) + 13.3\,(PNS) + 20.1\,(COT)$$

JCA: Accreditation by the Joint Commission on Accreditation of Healthcare Organizations

CP: Cancer Program approved by the American College of Surgeons

RES: Residency approved by the American Medical Association

MS: Medical School Affiliation reported by the American Medical Association

PNS: Hospital-controlled professional nursing school reported by the National League for Nursing

COT: Member of Council of Teaching Hospitals of the Association of American Medical Colleges

In the national sample patient file, the following cut-offs are used to stratify hospitals by teaching status.

Ip value under 25.0	Nonteaching Institution
Ip value 25.0-74.9	Minor Teaching Institution
Ip value 75.0+	Major Teaching Institution

Appendix 2

STATE INCLUSIONS BY REGION

Northeast	North Central	South	West
Connecticut	Illinois	Alabama	Alaska
Maine	Indiana	Arkansas	Arizona
Massachusetts	Iowa	Delaware	California
New Hampshire	Kansas	District of Columbia	Colorado
New Jersey	Michigan	Florida	Hawaii
New York	Minnesota	Georgia	Idaho
Pennsylvania	Missouri	Kentucky	Montana
Rhode Island	Nebraska	Louisiana	Nevada
Vermont	North Dakota	Maryland	New Mexico
	Ohio	Mississippi	Oregon
	South Dakota	North Carolina	Utah
	Wisconsin	Oklahoma	Washington
		South Carolina	Wyoming
		Tennessee	
		Texas	
		Virginia	
		West Virginia	

HOSPTIAL UNIVERSE STRATIFICATION MATRIX

CENSUS DIVISION	TEACHING STATUS	HOSPITAL OWNERSHIP																			
		Gov., Nonfed., In Large Cities					Gov., Nonfed., Not in Large Cities					Nongov., Not-for-Profit					Nongov., For-Profit				
		BEDSIZE					BEDSIZE					BEDSIZE					BEDSIZE				
		6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +	6-99	100-199	200-399	400-499	500 +
NEW ENGLAND	NON																				
	MINOR																				
	MAJOR																				
MIDDLE ATLANTIC	NON																				
	MINOR																				
	MAJOR																				
EAST NORTH CENTRAL	NON																				
	MINOR																				
	MAJOR																				
WEST NORTH CENTRAL	NON																				
	MINOR																				
	MAJOR																				
SOUTH ATLANTIC	NON																				
	MINOR																				
	MAJOR																				
EAST SOUTH CENTRAL	NON																				
	MINOR																				
	MAJOR																				
WEST SOUTH CENTRAL	NON																				
	MINOR																				
	MAJOR																				
MOUNTAIN	NON																				
	MINOR																				
	MAJOR																				
PACIFIC	NON																				
	MINOR																				
	MAJOR																				

Appendix 4

DRG CLUSTER GROUPINGS

DRG Cluster	Description	DRGs
1	Craniotomy, Age >17 Except for Trauma	1
2	Craniotomy for Trauma Age >17	2
3	Craniotomy Age <18	3
4	Spinal Procedures	4
5	Extracranial Vascular Procedures	5
6	Carpal Tunnel Release	6
7	Peripheral & Cranial Nerve & Other Nerve System Procedures	7, 8
8	Spinal Disorders & Injuries	9
9	Nervous System Neoplasms	10, 11
10	Degenerative Nervous System Disorders	12
11	Multiple Sclerosis & Cerebellar Ataxia	13
12	Cerebrovascular Disorders Except TIA	14
13	Transient Ischemic Attacks	15
14	Nonspecific Cerebrovascular Disorders	16, 17
15	Cranial & Peripheral Nerve Disorders	18, 19
16	Nervous System Infection Except Viral Meningitis	20
17	Viral Meningitis	21
18	Hypertensive Encephalopathy	22
19	Nontraumatic Stupor & Coma	23
20	Seizure and Headache	24, 25, 26
21	Traumatic Stupor & Coma, Coma >1 Hour	27
22	Traumatic Stupor & Coma, Coma <1 Hour	28, 29, 30
23	Concussion	31, 32, 33
24	Other Disorders of Nervous System	34, 35
25	Retinal Procedures	36
26	Orbital Procedures	37
27	Primary Iris Procedures	38
28	Lens Procedures w/ or w/o Vitrectomy	39
29	Extraocular Procedures Except Orbit	40, 41
30	Intraocular Procedures Except Retina, Iris & Lens	42
31	Hyphema	43
32	Acute Major Eye Infections	44
33	Neurological Eye Disorders	45
34	Other Disorders of Eye	46, 47, 48
35	Major Head & Neck Procedures	49
36	Sialoadenectomy	50
37	Salivary Gland Procedures Except Sialoadenectomy	51
38	Cleft Lip & Palate Repair	52
39	Sinus & Mastoid Procedures	53, 54
40	Miscellaneous Ear, Nose & Throat Procedures	55
41	Rhinoplasty	56
42	T&A Proc. Except Tonsillectomy & Adenoidectomy	57, 58
43	Tonsillectomy & Adenoidectomy Procedures	59, 60
44	Myringotomy w/ Tube Insertion	61, 62
45	Other Ear, Nose, & Throat O.R. Procedures	63
46	Ear, Nose, & Throat Malignancy	64
47	Dysequilbrium	65
48	Epistaxis	66
49	Epiglottitis	67
50	Otitis Media & URI	68, 69, 70

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
51	Laryngotracheitis	71
52	Nasal Trauma & Deformity	72
53	Other Ear, Nose, & Throat Diagnoses	73, 74
54	Major Chest Procedures	75
55	Other Respiratory System O.R. Procedures	76, 77
56	Pulmonary Embolism	78
57	Resp. Infections & Inflammations	79, 80, 81
58	Respiratory Neoplasms	82
59	Major Chest Trauma	83, 84
60	Pleural Effusion	85, 86
61	Pulmonary Edema & Respiratory Failure	87
62	Chronic Obstructive Pulmonary Disease	88
63	Simple Pneumonia & Pleurisy	89, 90, 91
64	Interstitial Lung Disease	92, 93
65	Pneumothorax	94, 95
66	Bronchitis & Asthma	96, 97, 98
67	Respiratory Signs & Symptoms	99, 100
68	Other Respiratory System Dxs	101, 102
69	Heart Transplant	103
70	Cardiac Valve Procedures w/ Pump & w/ Cardiac Cath.	104
71	Cardiac Valve Procedures w/ Pump & w/o Cardiac Cath.	105
72	Coronary Bypass w/ Cardiac Cath.	106
73	Coronary Bypass w/o Cardiac Cath.	107
74	Other Cardiothoracic or Vascular Procedures w/ Pump	108
75	Other Cardiothoracic Procedures w/o Pump	109
76	Major Reconstructive Vascular Procedures w/o Pump	110, 111
77	Vascular Procedures Except Major Reconstruction w/o Pump	112
78	Amputation for Circ System Disorders Except Upper Limb & Toe	113
79	Upper Limb & Toe Amputation for Circ System Disorders	114
80	Perm Cardiac Pacemaker Implant w/ AMI, Heart Failure or Shock	115
81	Perm Cardiac Pacemaker Implant w/o AMI, Heart Failure or Shock	116
82	Cardiac Pacemaker Replace & Revis Except Pulse Generator Replacement	117
83	Cardiac Pacemaker Pulse Generator Replacement	118
84	Vein Ligation & Stripping	119
85	Other Circulatory System O.R. Procedures	120
86	Circulatory Disorders w/ AMI	121, 122, 123
87	Circulatory Disorders Except AMI, w/ Cardiac Cath. w/ Complex Dxs	124
88	Circulatory Disorders Except AMI, w/ Cardiac Cath. w/o Complex Dxs	125
89	Acute & Subacute Endocarditis	126
90	Heart Failure & Shock	127
91	Deep Vein Thrombophlebitis	128
92	Cardiac Arrest, Unexplained	129
93	Peripheral Vascular Disorders	130, 131
94	Atherosclerosis	132, 133
95	Hypertension	134
96	Cardiac Congenital & Valvular Disorders	135, 136, 137
97	Cardiac Arrhythmia & Conduction Disorders	138, 139
98	Angina Pectoris	140
99	Syncope & Collapse	141, 142
100	Chest Pain	143
101	Other Circulatory System Dxs	144, 145
102	Rectal Resection	146, 147
103	Major Small & Large Bowel Procedures	148, 149
104	Peritoneal Adhesiolysis	150, 151

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
105	Minor Small & Large Bowel Procedures	152, 153
106	Stomach, Esophageal, & Duodenal Procedures	154, 155, 156
107	Anal & Stomach Procedures	157, 158
108	Hernia Procedures Except Inguinal & Femoral, Ages 18+	159, 160
109	Inguinal & Femoral Hernia Procedures, Ages 18+	161, 162
110	Hernia Procedures, Ages 0-17	163
111	Appendectomy w/ Complicated Prin. Dx	164, 165
112	Appendectomy w/o Complicated Prin. Dx	166, 167
113	Mouth Procedures	168, 169
114	Other Digestive System O.R. Procedures	170, 171
115	Digestive Malignancy	172, 173
116	G.I. Hemorrhage	174, 175
117	Complicated Peptic Ulcer	176
118	Uncomplicated Peptic Ulcer	177, 178
119	Inflammatory Bowel Disease	179
120	G.I. Obstruction	180, 181
121	Esophagitis, Gastroent. & Misc. Digestive Disorders	182, 183, 184
122	Dental & Oral Disorders Except Extractions & Restorations	185, 186
123	Dental Extractions & Restorations	187
124	Other Digestive System Dxs	188, 189, 190
125	Major Pancreas, Liver, & Shunt Procedures	191
126	Minor Pancreas, Liver, & Shunt Procedures	192
127	Biliary Tract Procedures Except Total Cholecystectomy	193, 194
128	Total Cholecystectomy w/ C.D.E.	195, 196
129	Total Cholecystectomy w/o C.D.E.	197, 198
130	Hepatobiliary Diagnostic Procedure for Malignancy	199
131	Hepatobiliary Diagnostic Procedure for Non-Malignancy	200
132	Other Hepatobiliary or Pancreas O.R. Procedures	201
133	Cirrhosis & Alcoholic Hepatitis	202
134	Malignancy of Hepatobiliary System or Pancreas	203
135	Disorders of Pancreas Except Malignancy	204
136	Disorders of Liver Except Malignancy, Cirrhosis, Alcoholic Hepatitis	205, 206
137	Disorders of Biliary Tract	207, 208
138	Major Joint and Limb Attachment Procedures	209
139	Hip & Femur Procedures Except Major Joint	210, 211, 212
140	Amputations for Musculoskeletal System & Conn. Tissue Disorders	213
141	Back & Neck Procedures	214, 215
142	Biopsies of Musculoskeletal System & Connective Tissue	216
143	Wound Debridement & Skin Graft Except Hand, for Musculoskeletal & Conn. Tissue Dis.	217
144	Lower Extrem. & Humer Procedures Except Hip, Foot, Femur	218, 219, 220
145	Knee Procedures	221, 222
146	Major Shoulder/Elbow Procedures or Other Upper Extremity Procedures w/ CCs	223
147	Shoulder, Elbow, or Forearm Procedures Except Major Joint Procedures w/o CCs	224
148	Foot Procedures	225
149	Soft Tissue Procedures	226, 227
150	Major Thumb or Joint Procedures, or Other Hand or Wrist Procedures w/ CCs	228
151	Hand or Wrist Procedures Except Major Joint Procedures w/o CCs	229
152	Local Excision & Removal of Int. Fix. Devices of Hip & Femur	230
153	Local Excision & Removal of Int. Fix. Devices Except Hip & Femur	231
154	Arthroscopy	232

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
155	Other Musculoskeletal System & Conn. Tiss. O.R. Procedures	233, 234
156	Fractures of Femur	235
157	Fractures of Hip & Pelvis	236
158	Sprains, Strains, & Dislocations of Hip, Pelvis, & Thigh	237
159	Osteomyelitis	238
160	Path Fractures & Musculoskeletal & Conn. Tissue Malignancy	239
161	Connective Tissue Disorders	240, 241
162	Septic Arthritis	242
163	Medical Back Problems	243
164	Bone Diseases & Specific Arthropathies	244, 245
165	Non-Specific Arthropathies	246
166	Signs & Symptoms of Musculoskeletal System & Conn. Tissue	247
167	Tendonitis, Myositis, & Bursitis	248
168	Aftercare, Musculoskeletal System & Connective Tissue	249
169	Fx. Sprns., Strns., & Disl. of Forearm, Hand, Foot	250, 251, 252
170	Fx. Sprns., Strns., & Disl. of Up Arm, Low Leg, Except Foot	253, 254, 255
171	Other Dxs of Musculoskeletal System & Conn. Tiss.	256
172	Total Mastectomy for Malignancy	257, 258
173	Subtotal Mastectomy for Malignancy	259, 260
174	Breast Procedures for Non-Malig. Except Biopsy & Loc. Excision	261
175	Breast Biopsy & Loc. Excision for Non-Malignancy	262
176	Skin Grafts &/or Debridement for Skin Ulcer or Cellulitis	263, 264
177	Skin Graft &/or Debridement Except for Skin Ulcer or Cellulitis	265, 266
178	Perianal & Pilonidal Procedures	267
179	Skin, Subcutaneous Tiss. & Breast Plastic Procedures	268
180	Other Skin, Subcut. Tiss. & Breast O.R. Procedures	269, 270
181	Skin Ulcers	271
182	Major Skin Disorders	272, 273
183	Malignant Breast Disorders	274, 275
184	Non-Malignant Breast Disorders	276
185	Cellulitis	277, 278, 279
186	Trauma to Skin, Subcut. Tiss. & Breast	280, 281, 282
187	Minor Skin Disorders	283, 284
188	Amputation of Lower Limb for Endocrine, Nutritional & Metabolic Disorders	285
189	Adrenal & Pituitary Procedures	286
190	Skin Grafts & Wound Debridement, Endoc., Nutrit., & Meta. Disorders	287
191	O.R. Procedures for Obesity	288
192	Parathyroid Procedures	289
193	Thyroid Procedures	290
194	Thyroglossal Procedures	291
195	Other Endocrine, Nutrit., & Meta. O.R. Procedure	292, 293
196	Diabetes	294, 295
197	Nutritional & Misc. Metabolic Disorders	296, 297, 298
198	Inborn Errors of Metabolism	299
199	Endocrine Disorders	300, 301
200	Kidney Transplant	302
201	Kidney, Ureter, & Major Bladder Procedures for Neoplasm	303
202	Kidney, Ureter, & Major Bladder Procedures for Non-Neoplasm	304, 305
203	Prostatectomy	306, 307
204	Minor Bladder Procedures	308, 309
205	Transurethral Procedures	310, 311
206	Urethral Procedures	312, 313, 314
207	Other Kidney & Urinary Tract O.R. Procedures	315
208	Renal Failure	316

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
209	Admit for Renal Dialysis	317
210	Kidney & Urinary Tract Neoplasms	318, 319
211	Kidney & Urinary Tract Infections	320, 321, 322
212	Urinary Stones, &/or ESW Lithotripsy	323, 324
213	Kidney & Urinary Tract Signs & Symptoms	325, 326, 327
214	Urethral Stricture	328, 329, 330
215	Other Kidney & Urinary Tract Dxs	331, 332, 333
216	Major Male Pelvic Procedures	334, 335
217	Transurethral Prostatectomy	336, 337
218	Testes Procedures for Malignancy	338
219	Testes Procedures for Non-Malignancy	339, 340
220	Penis Procedures	341
221	Circumcision	342, 343
222	Other Male Repro. System O.R. Procedures for Malignancy	344
223	Other Male Repro. System O.R. Procedures Except for Malignancy	345
224	Malignancy, Male Repro. System	346, 347
225	Benign Prostatic Hypertrophy	348, 349
226	Inflammation of Male Repro. System	350
227	Sterilization, Male	351
228	Other Male Repro. System Dxs	352
229	Pelvic Evisceration, Radical Hysterectomy, & Radical Vulvectomy	353
230	Uterine & Adnexa Procedures for Non-Ovarian/Adnexal Malignancy	354, 355
231	Female Repro. System for Reconstructive Procedures	356
232	Uterine & Adnexa Procedures for Ovarian or Adnexal Malignancy	357
233	Uterine & Adnexa Procedures for Non-Malignancy	358, 359
234	Vagina, Cervix, & Vulva Procedures	360
235	Laparoscopy & Incisional Tubal Interruption	361
236	Endoscopic Tubal Interruption	362
237	D&C, Conization & Radio-Implant for Malignancy	363
238	D&C, Conization Except for Malignancy	364
239	Other Female Repro. System O.R. Procedures	365
240	Malignancy, Female Repro. System	366, 367
241	Infections, Female Repro. System	368
242	Menstrual & Other Female Repro. System Disorders	369
243	Cesarean Section	370, 371
244	Vaginal Delivery w/ Complicating Dxs	372
245	Vaginal Delivery w/o Complicating Dxs	373
246	Vaginal Delivery w/ Sterilization &/or D&C	374
247	Vaginal Delivery w/o O.R. Procedures Except Steril. &/or D&C	375
248	Postpartum & Postabortion Dxs w/o O.R. Procedures	376
249	Postpartum & Postabortion Dxs w/ O.R. Procedures	377
250	Ectopic Pregnancy	378
251	Threatened Abortion	379
252	Abortion w/o D&C	380
253	Abortion w/ D&C, Aspiration Curettage, or Hysterotomy	381
254	False Labor	382
255	Other Antepartum Dxs w/ Medical Complications	383
256	Other Antepartum Dxs w/o Medical Complications	384
257	Neonates, Died or Transferred to Another Acute Care Facility	385
258	Extreme Immaturity or Resp. Distress Syndrome, Neonate	386
259	Prematurity w/ Major Problems	387
260	Prematurity w/o Major Problems	388
261	Full Term Neonate w/ Major Problems	389
262	Neonates w/ Other Significant Problems	390

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
263	Normal Newborns	391
264	Splenectomy	392, 393
265	Other O.R. Procedures of Blood & Blood Forming Organs	394
266	Red Blood Cell Disorders	395, 396
267	Coagulation Disorders	397
268	Retriculoendothelial & Immunity Disorders	398, 399
269	Lymphoma & Leukemia w/ Major O.R. Procedures	400
270	Lymphoma & Non-Acute Leukemia w/ Other Procedures	401, 402
271	Lymphoma & Non-Acute Leukemia	403, 404
272	Acute Leukemia w/o Major O.R. Procedures	405, 473
273	Myeloprolif. Disorders or Poorly Diff. Neoplasm w/ Major O.R. Procedures	406, 407
274	Myeloprolif. Disorders or Poorly Diff. Neoplasm w/ Other O.R. Procedures	408
275	Radiotherapy	409
276	Chemotherapy	410
277	History of Malignancy w/o Endoscopy	411
278	History of Malignancy w/ Endoscopy	412
279	Other Myeloprolif. Disorders or Poorly Diff. Neoplasm Dxs	413, 414
280	O.R. Procedures for Infectious & Parasitic Diseases	415
281	Septicemia	416, 417
282	Postoperative & Post-Trauma Infections	418
283	Fever of Unknown Origin, Ages 18+	419, 420
284	Viral Illness, Age >17	421
285	Viral Illness & Fever of Unknown Origin, Age <18	422
286	Other Infections & Parasitic Disease Dxs	423
287	O.R. Procedures w/ Prin. Dx of Mental Illness	424
288	Acute Adjust. React. & Disturbances of Psychosocial Dysfunction	425
289	Depressive Neuroses	426
290	Neuroses Except Depressive	427
291	Disorders of Personality & Impulse Control	428
292	Organic Disturbances & Mental Retardation	429
293	Psychoses	430
294	Childhood Mental Disorders	431
295	Other Dxs of Mental Disorders	432
296	Alcohol/Drug Use & Induced Organic Mental Disorders, Left AMA	433
297	Alcohol/Drug Abuse, or Dependence, Detox, &/or Other Symptomatic Treatment	434,435
299	Alcohol/Drug Dependence w/Rehab. Therapy	436
300	Alcohol/Drug Dependence, Combined Rehab. & Detox. Therapy	437
301	No Longer Valid	438
302	Skin Grafts for Injuries	439
303	Wound Debridements for Injuries	440
304	Hand Procedures for Injuries	441
305	Other O.R. Procedures for Injuries	442, 443
306	Multiple Trauma	444, 445, 446
307	Allergic Reactions	447, 448
308	Poisoning & Toxic Effects of Drugs	449, 450, 451
309	Complications of Treatment	452, 453
310	Other Injuries, Poisonings, & Toxic Eff Dxs	454, 455
311	Burns, Transferred to Another Acute Care Facility	456
312	Extensive Burns w/o O.R. Procedures	457
313	Non-Extensive Burns w/ Skin Grafts	458
314	Non-Extensive Burns w/ Wound Debridement or Other O.R. Procedures	459
315	Non-Extensive Burns w/o O.R. Procedures	460

DRG CLUSTER GROUPINGS (Continued)

DRG Cluster	Description	DRGs
316	O.R. Procedures w/ Dxs of Other Contact w/ Health Services	461
317	Rehabilitation	462
318	Signs & Symptoms	463, 464
319	Aftercare w/ Hist. of Malignancy as Secondary Dx	465
320	Aftercare w/o Hist. of Malignancy as Secondary Dx	466
321	Other Factors Influencing Health Status	467
322	Unrelated O.R. Procedures	468
323	Prin. Dx Invalid as Discharge Dx	469
324	Ungroupable	470
325	Bilateral or Multiple Major Joint Procedures of Lower Extrem.	471
326	Extensive Burns w/ O.R. Procedures	472
327	Respiratory System Dx with Tracheostomy	474
328	Respiratory System Dx with Ventilator Support	475

Appendix 5

HEALTH CARE FINANCING ADMINISTRATION (HCFA) DEFINED COMPLICATIONS AND COMORBIDITIES

This list consists of *ICD-9-CM* diagnosis codes which represent substantial complications and comorbidities when present as secondary diagnoses, as defined by HCFA.

V23.8	011.50	012.14	013.61	016.15	016.92	017.76	036.82	054.79
V23.9	011.51	012.15	013.62	016.16	016.93	017.80	036.89	054.8
V42.0	011.52	012.16	013.63	016.20	016.94	017.81	036.9	055.0
V42.1	011.53	013.00	013.64	016.21	016.95	017.82	037	055.1
V42.2	011.54	013.01	013.65	016.22	016.96	017.83	038.0	055.2
V42.6	011.55	013.02	013.66	016.23	017.20	017.84	038.1	055.71
V42.7	011.56	013.03	013.80	016.24	017.21	017.85	038.2	055.79
V42.8	011.60	013.04	013.81	016.25	017.22	017.86	038.3	055.8
V43.2	011.61	013.05	013.82	016.26	017.23	017.90	038.40	056.00
V45.1	011.62	013.06	013.83	016.30	017.24	017.91	038.41	056.01
V46.1	011.63	013.10	013.84	016.31	017.25	017.92	038.42	056.09
011.00	011.64	013.11	013.85	016.32	017.26	017.93	038.43	056.71
011.01	011.65	013.12	013.86	016.33	017.30	017.94	038.44	056.79
011.02	011.66	013.13	013.90	016.34	017.31	017.95	038.49	056.8
011.03	011.70	013.14	013.91	016.35	017.32	017.96	038.8	070.2
011.04	011.71	013.15	013.92	016.36	017.33	018.00	038.9	070.3
011.05	011.72	013.16	013.93	016.40	017.34	018.01	040.0	070.4
011.06	011.73	013.20	013.94	016.41	017.35	018.02	042.0	070.5
011.10	011.74	013.21	013.95	016.42	017.36	018.03	042.1	070.6
011.11	011.75	013.22	013.96	016.43	017.40	018.04	042.2	070.9
011.12	011.76	013.23	014.00	016.44	017.41	018.05	042.9	072.0
011.13	011.80	013.24	014.01	016.45	017.42	018.06	043.0	072.1
011.14	011.81	013.25	014.02	016.46	017.43	018.80	043.1	072.2
011.15	011.82	013.26	014.03	016.50	017.44	018.81	043.2	072.3
011.16	011.83	013.30	014.04	016.51	017.45	018.82	043.3	072.71
011.20	011.84	013.31	014.05	016.52	017.46	018.83	043.9	072.72
011.21	011.85	013.32	014.06	016.53	017.50	018.84	044.0	072.79
011.22	011.86	013.33	014.80	016.54	017.51	018.85	044.9	072.8
011.23	011.90	013.34	014.81	016.55	017.52	018.86	046.2	086.0
011.24	011.91	013.35	014.82	016.56	017.53	018.90	052.0	090.40
011.25	011.92	013.36	014.83	016.60	017.54	018.91	052.1	090.41
011.26	011.93	013.40	014.84	016.61	017.55	018.92	052.7	090.42
011.30	011.94	013.41	014.85	016.62	017.56	018.93	052.8	090.49
011.31	011.95	013.42	014.86	016.63	017.60	018.94	052.9	093.0
011.32	011.96	013.43	016.00	016.64	017.61	018.95	053.0	093.1
011.33	012.00	013.44	016.01	016.65	017.62	018.96	053.10	093.20
011.34	012.01	013.45	016.02	016.66	017.63	031.0	053.11	093.21
011.35	012.02	013.46	016.03	016.70	017.64	036.0	053.12	093.22
011.36	012.03	013.50	016.04	016.71	017.65	036.1	053.13	093.23
011.40	012.04	013.51	016.05	016.72	017.66	036.2	053.19	093.24
011.41	012.05	013.52	016.06	016.73	017.70	036.3	053.79	093.81
011.42	012.06	013.53	016.10	016.74	017.71	036.40	053.8	093.82
011.43	012.10	013.54	016.11	016.75	017.72	036.41	054.3	093.89
011.44	012.11	013.55	016.12	016.76	017.73	036.42	054.5	093.9
011.45	012.12	013.56	016.13	016.90	017.74	036.43	054.71	094.0
011.46	012.13	013.60	016.14	016.91	017.75	036.81	054.72	094.1

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

094.2	130.3	156.9	197.6	201.05	201.77	202.50	207.1	259.2
094.3	130.4	157.0	197.7	201.06	201.78	202.51	207.2	260
094.81	130.5	157.1	197.8	201.07	201.90	202.52	207.8	261
094.87	130.7	157.2	198.0	201.08	201.91	202.53	208.0	262
094.89	130.8	157.3	198.1	201.10	201.92	202.54	208.1	263.0
094.9	135	157.4	198.2	201.11	201.93	202.55	208.2	263.1
098.0	136.3	157.8	198.3	201.12	201.94	202.56	208.8	263.2
098.10	137.0	157.9	198.4	201.13	201.95	202.57	208.9	263.8
098.11	137.1	162.2	198.5	201.14	201.96	202.58	242.00	263.9
098.12	137.2	162.3	198.6	201.15	201.97	202.60	242.01	269.0
098.13	138	162.4	198.7	201.16	201.98	202.61	242.10	273.3
098.14	150.0	162.5	198.81	201.17	202.00	202.62	242.11	276.0
098.15	150.1	162.8	198.82	201.18	202.01	202.63	242.20	276.1
098.16	150.2	162.9	198.89	201.20	202.02	202.64	242.21	276.2
098.17	150.3	163.0	199.0	201.21	202.03	202.65	242.30	276.3
098.19	150.4	163.1	200.00	201.22	202.04	202.66	242.31	276.4
112.4	150.5	163.8	200.01	201.23	202.05	202.67	242.40	276.5
112.5	150.8	163.9	200.02	201.24	202.06	202.68	242.41	276.6
112.81	150.9	164.0	200.03	201.25	202.07	202.80	242.80	276.7
112.82	151.0	164.1	200.04	201.26	202.08	202.81	242.81	276.8
112.83	151.1	164.2	200.05	201.27	202.10	202.82	242.90	276.9
114.0	151.2	164.3	200.06	201.28	202.11	202.83	242.91	277.00
114.2	151.3	164.8	200.07	201.40	202.12	202.84	250.01	277.01
114.3	151.4	164.9	200.08	201.41	202.13	202.85	250.10	279.02
114.9	151.5	189.0	200.10	201.42	202.14	202.86	250.11	279.03
115.00	151.6	189.1	200.11	201.43	202.15	202.87	250.20	279.04
115.01	151.8	189.2	200.12	201.44	202.16	202.88	250.21	279.05
115.02	151.9	191.0	200.13	201.45	202.17	202.90	250.30	279.06
115.03	152.0	191.1	200.14	201.46	202.18	202.91	250.31	279.09
115.04	152.1	191.2	200.15	201.47	202.20	202.92	250.40	279.10
115.05	152.2	191.3	200.16	201.48	202.21	202.93	250.41	279.11
115.10	152.3	191.4	200.17	201.50	202.22	202.94	250.50	279.12
115.11	152.8	191.5	200.18	201.51	202.23	202.95	250.51	279.13
115.12	152.9	191.6	200.20	201.52	202.24	202.96	250.60	279.19
115.13	153.0	191.7	200.21	201.53	202.25	202.97	250.61	279.2
115.14	153.1	191.8	200.22	201.54	202.26	202.98	250.70	279.3
115.15	153.2	191.9	200.23	201.55	202.27	203.0	250.71	279.4
115.19	153.3	192.0	200.24	201.56	202.28	203.1	250.80	279.8
115.90	153.4	192.1	200.25	201.57	202.30	203.8	250.81	279.9
115.91	153.5	192.2	200.26	201.58	202.31	204.0	250.90	280.0
115.92	153.6	192.3	200.27	201.60	202.32	204.1	250.91	281.4
115.93	153.7	192.8	200.28	201.61	202.33	204.2	251.0	281.8
115.94	153.8	196.0	200.80	201.62	202.34	204.8	251.3	282.4
115.95	153.9	196.1	200.81	201.63	202.35	204.9	252.1	282.60
115.99	154.0	196.2	200.82	201.64	202.36	205.0	253.2	282.61
116.0	154.1	196.3	200.83	201.65	202.37	205.1	253.5	282.62
116.1	154.2	196.5	200.84	201.66	202.38	205.2	254.1	282.63
117.3	154.3	196.6	200.85	201.67	202.40	205.3	255.0	282.69
117.4	154.8	196.8	200.86	201.68	202.41	205.8	255.3	283.0
117.5	155.0	196.9	200.87	201.70	202.42	205.9	255.4	283.1
117.6	155.1	197.0	200.88	201.71	202.43	206.0	255.5	283.2
117.7	155.2	197.1	201.00	201.72	202.44	206.1	255.6	283.9
118	156.0	197.2	201.01	201.73	202.45	206.2	258.0	284.0
130.0	156.1	197.3	201.02	201.74	202.46	206.8	258.1	284.8
130.1	156.2	197.4	201.03	201.75	202.47	206.9	258.8	284.9
130.2	156.8	197.5	201.04	201.76	202.48	207.0	258.9	285.0

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

285.1	295.40	304.50	324.1	401.0	425.5	441.1	484.5	517.1
286.0	295.41	304.51	324.9	402.00	425.7	441.3	484.6	517.2
286.1	295.42	304.52	325	402.01	425.8	441.5	484.7	517.8
286.2	295.43	304.60	331.4	402.11	425.9	444.0	484.8	518.0
286.3	295.44	304.61	335.0	402.91	426.0	444.1	485	518.1
286.4	295.60	304.62	335.10	403.0	426.10	444.21	486	518.4
286.5	295.61	304.70	335.11	404.0	426.11	444.22	487.0	518.5
286.6	295.62	304.71	335.19	405.01	426.12	444.81	491.1	518.81
286.7	295.63	304.72	335.20	405.09	426.13	444.89	491.2	518.82
286.9	295.64	304.80	335.21	410.0	426.2	444.9	491.8	519.0
287.0	295.70	304.81	335.22	410.1	426.3	446.0	491.9	519.2
287.1	295.71	304.82	335.23	410.2	426.4	446.2	492.8	527.3
287.2	295.72	304.90	335.24	410.3	426.50	446.3	493.01	527.4
287.3	295.73	304.91	335.29	410.4	426.51	446.4	493.11	528.3
287.4	295.74	304.92	335.8	410.5	426.52	446.5	493.91	530.4
287.5	295.80	305.00	335.9	410.6	426.53	446.6	494	530.7
287.8	295.81	305.01	340	410.7	426.54	446.7	495.0	531.00
287.9	295.82	305.02	343.2	410.8	426.6	447.0	495.1	531.01
288.0	295.83	305.30	344.0	410.9	426.7	448.0	495.2	531.10
288.1	295.84	305.31	345.1	411.0	426.81	451.0	495.3	531.11
291.0	295.90	305.32	345.2	411.1	426.89	451.11	495.4	531.20
291.1	295.91	305.40	345.3	411.8	426.9	451.19	495.5	531.21
291.2	295.92	305.41	348.1	413.0	427.0	451.2	495.6	531.31
291.3	295.93	305.42	349.0	413.1	427.1	451.81	495.7	531.40
291.4	295.94	305.50	349.1	413.9	427.2	452	495.8	531.41
291.8	296.04	305.51	349.81	415.0	427.31	453.0	495.9	531.50
291.9	296.14	305.52	349.82	415.1	427.32	453.1	496	531.51
292.0	296.34	305.60	358.0	416.0	427.41	453.2	500	531.60
292.11	296.44	305.61	358.1	420.0	427.42	453.3	501	531.61
292.12	296.54	305.62	359.0	420.90	427.5	456.0	502	531.71
292.2	296.64	305.70	359.1	420.91	428.0	456.20	503	531.91
292.81	298.0	305.71	377.00	420.99	428.1	457.2	504	532.00
292.82	298.3	305.72	377.01	421.0	428.9	459.0	505	532.01
292.83	298.4	305.90	377.02	421.1	429.0	464.11	506.0	532.10
292.84	299.00	305.91	383.01	421.9	429.4	464.21	506.1	532.11
292.89	299.10	305.92	383.30	422.0	429.5	464.31	507.0	532.20
292.9	299.80	307.1	383.81	422.90	429.6	475	507.1	532.21
295.00	299.90	318.2	394.0	422.91	429.81	478.21	507.8	532.31
295.01	303.00	320.0	394.1	422.92	429.82	478.22	508.0	532.40
295.02	303.01	320.1	394.2	422.93	430	478.24	508.1	532.41
295.03	303.02	320.2	394.9	422.99	431	478.30	510.0	532.50
295.04	303.90	320.3	395.0	423.0	432.0	478.31	510.9	532.51
295.10	303.91	320.7	395.1	423.1	432.1	478.32	511.1	532.60
295.11	303.92	320.8	395.2	423.2	433.0	478.33	511.8	532.61
295.12	304.00	320.9	395.9	424.0	433.1	478.34	511.9	532.71
295.13	304.01	321.0	396.0	424.1	433.2	481	512.0	532.91
295.14	304.02	321.1	396.1	424.2	433.3	482.0	512.8	533.00
295.21	304.10	321.2	396.2	424.3	434.0	482.1	513.0	533.01
295.22	304.11	321.3	396.3	424.90	434.1	482.2	513.1	533.10
295.23	304.12	321.4	396.8	424.91	434.9	482.3	515	533.11
295.24	304.20	321.8	396.9	424.99	436	482.4	516.0	533.20
295.30	304.21	322.0	397.0	425.0	437.2	482.8	516.1	533.21
295.31	304.22	322.1	397.1	425.1	437.4	482.9	516.2	533.31
295.32	304.40	322.2	397.9	425.2	437.5	483	516.3	533.40
295.33	304.41	322.9	398.0	425.3	437.6	484.1	516.8	533.41
295.34	304.42	324.0	398.91	425.4	441.0	484.3	516.9	533.50

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

533.51	552.8	575.8	599.0	639.0	644.13	668.00	673.14	707.1
533.60	552.9	576.1	599.4	639.1	646.60	668.01	673.20	708.0
533.61	557.0	576.3	599.6	639.2	646.61	668.02	673.21	710.0
533.71	558.1	576.4	599.7	639.3	646.62	668.03	673.22	710.1
533.91	558.2	577.0	601.0	639.4	646.63	668.04	673.23	710.3
534.00	560.0	577.2	601.2	639.5	646.64	668.10	673.24	710.4
534.01	560.1	578.0	601.3	639.6	646.70	668.11	673.30	710.8
534.10	560.2	578.1	602.1	639.8	646.71	668.12	673.31	711.00
534.11	560.30	578.9	603.1	639.9	646.73	668.13	673.32	711.01
534.20	560.31	579.3	604.0	640.00	647.30	668.14	673.33	711.02
534.21	560.39	580.0	607.1	640.01	647.31	668.20	673.34	711.03
534.31	560.81	580.4	607.2	640.03	647.32	668.21	673.80	711.04
534.40	560.89	580.81	607.3	640.80	647.33	668.22	673.81	711.05
534.41	560.9	580.89	611.72	640.81	647.34	668.23	673.82	711.06
534.50	566	580.9	614.0	640.83	647.40	668.24	673.83	711.07
534.51	567.0	581.0	614.3	640.90	647.41	668.80	673.84	711.08
534.60	567.1	581.1	614.5	640.91	647.42	668.81	674.00	711.09
534.61	567.2	581.2	615.0	640.93	647.43	668.82	674.01	711.60
534.71	567.8	581.3	616.3	641.00	647.44	668.83	674.02	711.61
534.91	567.9	581.81	616.4	641.01	648.00	668.84	674.03	711.62
535.0	568.81	581.89	619.0	641.03	648.01	668.90	674.04	711.63
536.1	569.3	581.9	619.1	641.10	648.02	668.91	674.10	711.64
537.0	569.5	583.4	619.2	641.11	648.03	668.92	674.12	711.65
537.3	569.6	584.5	619.8	641.13	648.04	668.93	674.20	711.66
537.4	569.83	584.6	619.9	641.30	648.20	668.94	674.22	711.67
540.0	570	584.7	620.7	641.31	648.21	669.10	674.24	711.68
540.1	571.1	584.8	634.00	641.33	648.22	669.11	675.10	711.69
540.9	571.2	584.9	634.01	641.80	648.23	669.12	675.11	714.1
550.00	571.49	585	634.02	641.81	648.24	669.13	675.12	714.2
550.01	571.5	590.10	634.10	641.83	648.30	669.14	680.0	714.30
550.02	571.6	590.11	634.11	641.90	648.31	669.30	680.1	714.31
550.03	572.0	590.2	634.12	641.91	648.32	669.32	680.2	714.32
550.10	572.1	590.3	634.20	641.93	648.33	669.34	680.3	714.33
550.11	572.2	590.80	634.21	642.40	648.34	670.00	680.4	722.80
550.12	572.4	590.81	634.22	642.41	648.50	670.02	680.5	722.81
550.13	573.1	590.9	634.30	642.42	648.51	670.04	680.6	722.82
551.00	573.2	591	634.31	642.43	648.52	671.20	680.7	722.83
551.01	573.3	592.1	634.32	642.44	648.53	671.21	680.8	723.4
551.02	573.4	593.5	634.40	642.50	648.54	671.22	680.9	723.5
551.03	574.00	595.0	634.41	642.51	648.60	671.23	682.0	728.0
551.1	574.01	595.1	634.42	642.52	648.61	671.24	682.1	730.00
551.20	574.10	595.2	634.50	642.53	648.62	671.30	682.2	730.01
551.21	574.11	595.4	634.51	642.54	648.63	671.31	682.3	730.02
551.29	574.21	595.81	634.52	642.60	648.64	671.33	682.4	730.03
551.3	574.30	595.82	634.60	642.61	659.30	671.40	682.5	730.04
551.8	574.31	595.89	634.61	642.62	659.31	671.42	682.6	730.05
551.9	574.40	595.9	634.62	642.63	659.33	671.44	682.7	730.06
552.00	574.41	596.0	634.70	642.64	665.00	673.00	682.8	730.07
552.01	574.50	596.1	634.71	642.70	665.01	673.01	682.9	730.08
552.02	574.51	596.2	634.72	642.71	665.03	673.02	683	730.09
552.03	575.0	596.4	634.80	642.72	665.10	673.03	684	730.80
552.1	575.2	596.6	634.81	642.73	665.11	673.04	685.0	730.81
552.20	575.3	596.7	634.82	642.74	665.12	673.10	694.4	730.82
552.21	575.4	597.0	634.90	644.00	665.14	673.11	694.5	730.83
552.29	575.5	598.1	634.91	644.03	666.32	673.12	695.0	730.84
552.3	575.6	598.2	634.92	644.10	666.34	673.13	707.0	730.85

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

730.86	768.5	785.50	800.53	801.23	801.93	803.30	804.00	804.70
730.87	769	785.51	800.54	801.24	801.94	803.31	804.01	804.71
730.88	770.0	785.59	800.55	801.25	801.95	803.32	804.02	804.72
730.89	770.1	786.3	800.56	801.26	801.96	803.33	804.03	804.73
730.90	770.2	788.0	800.59	801.29	801.99	803.34	804.04	804.74
730.91	770.3	788.2	800.60	801.30	802.1	803.35	804.05	804.75
730.92	770.4	789.5	800.61	801.31	802.20	803.36	804.06	804.76
730.93	770.5	790.7	800.62	801.32	802.21	803.39	804.09	804.79
730.94	770.7	790.8	800.63	801.33	802.22	803.40	804.10	804.80
730.95	771.0	791.1	800.64	801.34	802.23	803.41	804.11	804.81
730.96	771.1	791.3	800.65	801.35	802.24	803.42	804.12	804.82
730.97	771.3	799.1	800.66	801.36	802.25	803.43	804.13	804.83
730.98	771.8	799.4	800.69	801.39	802.26	803.44	804.14	804.84
730.99	772.1	800.00	800.70	801.40	802.27	803.45	804.15	804.85
733.1	772.2	800.01	800.71	801.41	802.28	803.46	804.16	804.86
741.00	772.4	800.02	800.72	801.42	802.29	803.49	804.19	804.89
741.01	772.5	800.03	800.73	801.43	802.30	803.50	804.20	804.90
741.02	773.0	800.04	800.74	801.44	802.31	803.51	804.21	804.91
741.03	773.1	800.05	800.75	801.45	802.32	803.52	804.22	804.92
741.90	773.2	800.06	800.76	801.46	802.33	803.53	804.23	804.93
741.91	773.3	800.09	800.79	801.49	802.34	803.54	804.24	804.94
741.92	773.4	800.10	800.80	801.50	802.35	803.55	804.25	804.95
741.93	774.0	800.11	800.81	801.51	802.36	803.56	804.26	804.96
745.0	774.1	800.12	800.82	801.52	802.37	803.59	804.29	804.99
745.10	774.2	800.13	800.83	801.53	802.38	803.60	804.30	805.00
745.11	774.30	800.14	800.84	801.54	802.39	803.61	804.31	805.01
745.12	774.31	800.15	800.85	801.55	802.4	803.62	804.32	805.02
745.19	774.39	800.16	800.86	801.56	802.5	803.63	804.33	805.03
745.2	774.4	800.19	800.89	801.59	802.6	803.64	804.34	805.04
745.3	774.5	800.20	800.90	801.60	802.7	803.65	804.35	805.05
745.4	774.7	800.21	800.91	801.61	802.8	803.66	804.36	805.06
745.60	775.1	800.22	800.92	801.62	802.9	803.69	804.39	805.07
745.69	775.2	800.23	800.93	801.63	803.00	803.70	804.40	805.08
745.7	775.3	800.24	800.94	801.64	803.01	803.71	804.41	805.10
746.01	775.4	800.25	800.95	801.65	803.02	803.72	804.42	805.11
746.02	775.5	800.26	800.96	801.66	803.03	803.73	804.43	805.12
746.1	775.6	800.29	800.99	801.69	803.04	803.74	804.44	805.13
746.2	775.7	800.30	801.00	801.70	803.05	803.75	804.45	805.14
746.3	776.0	800.31	801.01	801.71	803.06	803.76	804.46	805.15
746.4	776.1	800.32	801.02	801.72	803.09	803.79	804.49	805.16
746.5	776.2	800.33	801.03	801.73	803.10	803.80	804.50	805.17
746.6	776.3	800.34	801.04	801.74	803.11	803.81	804.51	805.18
746.7	777.1	800.35	801.05	801.75	803.12	803.82	804.52	805.2
746.81	777.2	800.36	801.06	801.76	803.13	803.83	804.53	805.3
746.82	777.5	800.39	801.09	801.79	803.14	803.84	804.54	805.4
746.83	777.6	800.40	801.10	801.80	803.15	803.85	804.55	805.5
746.84	778.0	800.41	801.11	801.81	803.16	803.86	804.56	805.6
746.86	779.0	800.42	801.12	801.82	803.19	803.89	804.59	805.7
747.10	779.1	800.43	801.13	801.83	803.20	803.90	804.60	805.8
747.11	779.3	800.44	801.14	801.84	803.21	803.91	804.61	805.9
747.22	779.4	800.45	801.15	801.85	803.22	803.92	804.62	806.00
748.4	780.0	800.46	801.16	801.86	803.23	803.93	804.63	806.01
748.5	780.1	800.49	801.19	801.89	803.24	803.94	804.64	806.02
748.61	780.3	800.50	801.20	801.90	803.25	803.95	804.65	806.03
765.0	781.7	800.51	801.21	801.91	803.26	803.96	804.66	806.04
767.0	785.4	800.52	801.22	801.92	803.29	803.99	804.69	806.05

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

806.06	807.14	839.11	851.51	852.21	854.11	864.09	871.1	902.0
806.07	807.15	839.12	851.52	852.22	854.12	864.10	871.2	902.10
806.08	807.16	839.13	851.53	852.23	854.13	864.11	871.3	902.11
806.09	807.17	839.14	851.54	852.24	854.14	864.12	871.4	902.19
806.10	807.18	839.15	851.55	852.25	854.15	864.13	871.9	902.20
806.11	807.19	839.16	851.56	852.26	854.16	864.14	872.72	902.22
806.12	807.2	839.17	851.59	852.29	854.19	864.19	872.73	902.23
806.13	807.3	839.18	851.60	852.30	860.0	865.00	872.74	902.24
806.14	807.4	850.0	851.61	852.31	860.1	865.01	873.33	902.25
806.15	807.5	850.1	851.62	852.32	860.2	865.02	873.9	902.26
806.16	807.6	850.2	851.63	852.33	860.3	865.03	874.00	902.27
806.17	808.0	850.3	851.64	852.34	860.4	865.04	874.01	902.29
806.18	808.1	850.4	851.65	852.35	860.5	865.09	874.02	902.31
806.19	808.2	850.5	851.66	852.36	861.01	865.10	874.10	902.32
806.20	808.3	850.9	851.69	852.39	861.02	865.11	874.11	902.33
806.21	808.43	851.00	851.70	852.40	861.03	865.12	874.12	902.34
806.22	808.49	851.01	851.71	852.41	861.10	865.13	874.3	902.39
806.23	808.51	851.02	851.72	852.42	861.11	865.14	874.5	902.40
806.24	808.52	851.03	851.73	852.43	861.12	865.19	875.0	902.41
806.25	808.53	851.04	851.74	852.44	861.13	866.00	875.1	902.42
806.26	808.59	851.05	851.75	852.45	861.22	866.01	887.0	902.49
806.27	808.8	851.06	851.76	852.46	861.30	866.02	887.1	902.50
806.28	808.9	851.09	851.79	852.49	861.31	866.03	887.2	902.51
806.29	820.00	851.10	851.80	852.50	861.32	866.10	887.3	902.52
806.30	820.01	851.11	851.81	852.51	862.1	866.11	887.4	902.53
806.31	820.02	851.12	851.82	852.52	862.21	866.12	887.5	902.54
806.32	820.03	851.13	851.83	852.53	862.22	866.13	887.6	902.59
806.33	820.09	851.14	851.84	852.54	862.29	867.0	887.7	902.87
806.34	820.10	851.15	851.85	852.55	862.31	867.1	896.0	904.0
806.35	820.11	851.16	851.86	852.56	862.32	867.2	896.1	925
806.36	820.12	851.19	851.89	852.59	862.39	867.3	896.2	929.0
806.37	820.13	851.20	851.90	853.00	862.9	867.4	896.3	952.00
806.38	820.19	851.21	851.91	853.01	863.1	867.5	897.0	952.01
806.39	820.20	851.22	851.92	853.02	863.30	867.6	897.1	952.02
806.4	820.21	851.23	851.93	853.03	863.31	867.7	897.2	952.03
806.5	820.22	851.24	851.94	853.04	863.39	867.8	897.3	952.04
806.60	820.30	851.25	851.95	853.05	863.50	867.9	897.4	952.05
806.61	820.31	851.26	851.96	853.06	863.51	868.00	897.5	952.06
806.62	820.32	851.29	851.99	853.09	863.52	868.01	897.6	952.07
806.69	820.8	851.30	852.00	853.10	863.53	868.02	897.7	952.08
806.70	820.9	851.31	852.01	853.11	863.54	868.03	900.00	952.09
806.71	821.00	851.32	852.02	853.12	863.55	868.04	900.01	952.10
806.72	821.01	851.33	852.03	853.13	863.56	868.09	900.02	952.11
806.79	821.10	851.34	852.04	853.14	863.59	868.10	900.03	952.12
806.8	821.11	851.35	852.05	853.15	863.90	868.11	900.1	952.13
806.9	838.19	851.36	852.06	853.16	863.91	868.12	900.81	952.14
807.04	839.00	851.39	852.09	853.19	863.92	868.13	900.82	952.15
807.05	839.01	851.40	852.10	854.00	863.93	868.14	900.89	952.16
807.06	839.02	851.41	852.11	854.01	863.94	868.19	900.9	952.17
807.07	839.03	851.42	852.12	854.02	863.95	869.0	901.0	952.18
807.08	839.04	851.43	852.13	854.03	863.99	869.1	901.1	952.19
807.09	839.05	851.44	852.14	854.04	864.00	870.3	901.2	952.2
807.10	839.06	851.45	852.15	854.05	864.01	870.4	901.3	952.3
807.11	839.07	851.46	852.16	854.06	864.02	870.8	901.41	952.4
807.12	839.08	851.49	852.19	854.09	864.03	870.9	901.42	952.8
807.13	839.10	851.50	852.20	854.10	864.04	871.0	901.83	952.9

HCFA DEFINED COMPLICATIONS AND COMORBIDITIES (Continued)

953.0	958.1	996.02	996.51	996.81	996.93	997.4	998.5	999.5
953.1	958.2	996.03	996.52	996.82	996.94	997.5	998.6	999.6
953.2	958.3	996.09	996.53	996.83	996.95	997.62	998.7	999.7
953.3	958.4	996.1	996.54	996.84	996.96	997.9	998.8	999.8
953.4	958.5	996.2	996.59	996.86	996.99	998.0	998.9	
953.5	958.7	996.30	996.6	996.89	997.0	998.1	999.1	
953.8	995.4	996.39	996.7	996.90	997.1	998.2	999.2	
953.9	996.00	996.4	996.8	996.91	997.2	998.3	999.3	
958.0	996.01	996.5	996.80	996.92	997.3	998.4	999.4	

NOTE: Grouper logic was modified such that specific diagnoses included on the CC list will not be considered CC codes when used with a specific principal diagnosis.

Appendix 6

ERROR RANGE TABLES

PERCENT	PATIENT NUMBER							
DIED	5	10	15	20	25	30	35	40
1%	13.35	9.44	7.71	6.67	5.97	5.45	5.05	4.72
2%	18.78	13.28	10.84	9.39	8.40	7.67	7.10	6.64
3%	22.89	16.18	13.21	11.44	10.24	9.34	8.65	8.09
4%	26.29	18.59	15.18	13.15	11.76	10.73	9.94	9.30
5%	29.24	20.68	16.88	14.62	13.08	11.94	11.05	10.34
6%	31.86	22.53	18.40	15.93	14.25	13.01	12.04	11.26
7%	34.23	24.21	19.76	17.12	15.31	13.97	12.94	12.10
8%	36.40	25.74	21.01	18.20	16.28	14.86	13.76	12.87
9%	38.40	27.15	22.17	19.20	17.17	15.67	14.51	13.57
10%	40.25	28.46	23.24	20.12	18.00	16.43	15.21	14.23
11%	41.98	29.68	24.24	20.99	18.77	17.14	15.87	14.84
12%	43.60	30.83	25.17	21.80	19.50	17.80	16.48	15.41
13%	45.12	31.90	26.05	22.56	20.18	18.42	17.05	15.95
14%	46.55	32.92	26.88	23.28	20.82	19.01	17.60	16.46
15%	47.91	33.87	27.66	23.95	21.42	19.56	18.11	16.94
16%	49.19	34.78	28.40	24.59	22.00	20.08	18.59	17.39
17%	50.40	35.64	29.10	25.20	22.54	20.57	19.05	17.82
18%	51.54	36.45	29.76	25.77	23.05	21.04	19.48	18.22
19%	52.63	37.22	30.39	26.32	23.54	21.49	19.89	18.61
20%	53.67	37.95	30.98	26.83	24.00	21.91	20.28	18.97
21%	54.65	38.64	31.55	27.32	24.44	22.31	20.65	19.32
22%	55.58	39.30	32.09	27.79	24.85	22.69	21.01	19.65
23%	56.46	39.92	32.60	28.23	25.25	23.05	21.34	19.96
24%	57.30	40.52	33.08	28.65	25.62	23.39	21.66	20.26
25%	58.09	41.08	33.54	29.05	25.98	23.72	21.96	20.54
26%	58.85	41.61	33.98	29.42	26.32	24.02	22.24	20.81
27%	59.56	42.12	34.39	29.78	26.64	24.32	22.51	21.06
28%	60.24	42.60	34.78	30.12	26.94	24.59	22.77	21.30
29%	60.88	43.05	35.15	30.44	27.23	24.85	23.01	21.52
30%	61.48	43.47	35.50	30.74	27.50	25.10	23.24	21.74
31%	62.05	43.88	35.82	31.02	27.75	25.33	23.45	21.94
32%	62.58	44.25	36.13	31.29	27.99	25.55	23.65	22.13
33%	63.09	44.61	36.42	31.54	28.21	25.75	23.84	22.30
34%	63.55	44.94	36.69	31.78	28.42	25.95	24.02	22.47
35%	63.99	45.25	36.95	32.00	28.62	26.12	24.19	22.62
36%	64.40	45.54	37.18	32.20	28.80	26.29	24.34	22.77
37%	64.77	45.80	37.40	32.39	28.97	26.44	24.48	22.90
38%	65.12	46.05	37.60	32.56	29.12	26.59	24.61	23.02
39%	65.44	46.27	37.78	32.72	29.26	26.72	24.73	23.14
40%	65.73	46.48	37.95	32.86	29.39	26.83	24.84	23.24
41%	65.99	46.66	38.10	32.99	29.51	26.94	24.94	23.33
42%	66.22	46.82	38.23	33.11	29.61	27.03	25.03	23.41
43%	66.42	46.97	38.35	33.21	29.70	27.12	25.10	23.48
44%	66.60	47.09	38.45	33.30	29.78	27.19	25.17	23.55
45%	66.75	47.20	38.54	33.37	29.85	27.25	25.23	23.60
46%	66.87	47.28	38.61	33.43	29.90	27.30	25.27	23.64
47%	66.96	47.35	38.66	33.48	29.95	27.34	25.31	23.67
48%	67.03	47.40	38.70	33.51	29.98	27.36	25.33	23.70
49%	67.07	47.42	38.72	33.53	29.99	27.38	25.35	23.71
50%	67.08	47.43	38.73	33.54	30.00	27.39	25.35	23.72

ERROR RANGE TABLES (Continued)

PERCENT	PATIENT NUMBER							
DIED	45	50	55	60	65	70	75	80
1%	4.45	4.22	4.02	3.85	3.70	3.57	3.45	3.34
2%	6.26	5.94	5.66	5.42	5.21	5.02	4.85	4.70
3%	7.63	7.24	6.90	6.61	6.35	6.12	5.91	5.72
4%	8.76	8.31	7.93	7.59	7.29	7.03	6.79	6.57
5%	9.75	9.25	8.82	8.44	8.11	7.81	7.55	7.31
6%	10.62	10.08	9.61	9.20	8.84	8.52	8.23	7.97
7%	11.41	10.82	10.32	9.88	9.49	9.15	8.84	8.56
8%	12.13	11.51	10.97	10.51	10.09	9.73	9.40	9.10
9%	12.80	12.14	11.58	11.08	10.65	10.26	9.91	9.60
10%	13.42	12.73	12.14	11.62	11.16	10.76	10.39	10.06
11%	13.99	13.27	12.66	12.12	11.64	11.22	10.84	10.49
12%	14.53	13.79	13.15	12.59	12.09	11.65	11.26	10.90
13%	15.04	14.27	13.60	13.02	12.51	12.06	11.65	11.28
14%	15.52	14.72	14.04	13.44	12.91	12.44	12.02	11.64
15%	15.97	15.15	14.44	13.83	13.29	12.80	12.37	11.98
16%	16.40	15.55	14.83	14.20	13.64	13.15	12.70	12.30
17%	16.80	15.94	15.20	14.55	13.98	13.47	13.01	12.60
18%	17.18	16.30	15.54	14.88	14.30	13.78	13.31	12.89
19%	17.54	16.64	15.87	15.19	14.60	14.07	13.59	13.16
20%	17.89	16.97	16.18	15.49	14.88	14.34	13.86	13.42
21%	18.22	17.28	16.48	15.77	15.16	14.60	14.11	13.66
22%	18.53	17.57	16.76	16.04	15.41	14.85	14.35	13.89
23%	18.82	17.85	17.02	16.30	15.66	15.09	14.58	14.12
24%	19.10	18.12	17.28	16.54	15.89	15.31	14.79	14.32
25%	19.36	18.37	17.52	16.77	16.11	15.53	15.00	14.52
26%	19.62	18.61	17.74	16.99	16.32	15.73	15.19	14.71
27%	19.85	18.84	17.96	17.19	16.52	15.92	15.38	14.89
28%	20.08	19.05	18.16	17.39	16.71	16.10	15.55	15.06
29%	20.29	19.25	18.36	17.57	16.88	16.27	15.72	15.22
30%	20.49	19.44	18.54	17.75	17.05	16.43	15.87	15.37
31%	20.68	19.62	18.71	17.91	17.21	16.58	16.02	15.51
32%	20.86	19.79	18.87	18.07	17.36	16.73	16.16	15.65
33%	21.03	19.95	19.02	18.21	17.50	16.86	16.29	15.77
34%	21.18	20.10	19.16	18.35	17.63	16.99	16.41	15.89
35%	21.33	20.24	19.29	18.47	17.75	17.10	16.52	16.00
36%	21.47	20.36	19.42	18.59	17.86	17.21	16.63	16.10
37%	21.59	20.48	19.53	18.70	17.97	17.31	16.72	16.19
38%	21.71	20.59	19.63	18.80	18.06	17.40	16.81	16.28
39%	21.81	20.69	19.73	18.89	18.15	17.49	16.90	16.36
40%	21.91	20.78	19.82	18.97	18.23	17.57	16.97	16.43
41%	22.00	20.87	19.90	19.05	18.30	17.64	17.04	16.50
42%	22.07	20.94	19.97	19.12	18.37	17.70	17.10	16.55
43%	22.14	21.00	20.03	19.17	18.42	17.75	17.15	16.61
44%	22.20	21.06	20.08	19.22	18.47	17.80	17.20	16.65
45%	22.25	21.11	20.12	19.27	18.51	17.84	17.23	16.69
46%	22.29	21.15	20.16	19.30	18.55	17.87	17.26	16.72
47%	22.32	21.17	20.19	19.33	18.57	17.90	17.29	16.74
48%	22.34	21.20	20.21	19.35	18.59	17.91	17.31	16.76
49%	22.36	21.21	20.22	19.36	18.60	17.92	17.32	16.77
50%	22.36	21.21	20.23	19.36	18.61	17.93	17.32	16.77

ERROR RANGE TABLES (Continued)

PERCENT DIED	PATIENT NUMBER 85	90	95	100	105	110	115	120
1%	3.24	3.15	3.06	2.98	2.91	2.85	2.78	2.72
2%	4.56	4.43	4.31	4.20	4.10	4.00	3.92	3.83
3%	5.55	5.39	5.25	5.12	4.99	4.88	4.77	4.67
4%	6.38	6.20	6.03	5.88	5.74	5.61	5.48	5.37
5%	7.09	6.89	6.71	6.54	6.38	6.23	6.10	5.97
6%	7.73	7.51	7.31	7.12	6.95	6.79	6.64	6.50
7%	8.30	8.07	7.85	7.65	7.47	7.30	7.14	6.99
8%	8.83	8.58	8.35	8.14	7.94	7.76	7.59	7.43
9%	9.31	9.05	8.81	8.59	8.38	8.19	8.01	7.84
10%	9.76	9.49	9.23	9.00	8.78	8.58	8.39	8.22
11%	10.18	9.89	9.63	9.39	9.16	8.95	8.75	8.57
12%	10.57	10.28	10.00	9.75	9.51	9.30	9.09	8.90
13%	10.94	10.63	10.35	10.09	9.85	9.62	9.41	9.21
14%	11.29	10.97	10.68	10.41	10.16	9.93	9.71	9.50
15%	11.62	11.29	10.99	10.71	10.45	10.21	9.99	9.78
16%	11.93	11.59	11.28	11.00	10.73	10.49	10.26	10.04
17%	12.22	11.88	11.56	11.27	11.00	10.74	10.51	10.29
18%	12.50	12.15	11.83	11.53	11.25	10.99	10.75	10.52
19%	12.77	12.41	12.07	11.77	11.49	11.22	10.97	10.74
20%	13.02	12.65	12.31	12.00	11.71	11.44	11.19	10.95
21%	13.25	12.88	12.54	12.22	11.92	11.65	11.39	11.15
22%	13.48	13.10	12.75	12.43	12.13	11.85	11.59	11.34
23%	13.69	13.31	12.95	12.62	12.32	12.04	11.77	11.52
24%	13.90	13.51	13.15	12.81	12.50	12.22	11.95	11.70
25%	14.09	13.69	13.33	12.99	12.68	12.39	12.11	11.86
26%	14.27	13.87	13.50	13.16	12.84	12.55	12.27	12.01
27%	14.45	14.04	13.66	13.32	13.00	12.70	12.42	12.16
28%	14.61	14.20	13.82	13.47	13.15	12.84	12.56	12.30
29%	14.77	14.35	13.97	13.61	13.28	12.98	12.69	12.43
30%	14.91	14.49	14.10	13.75	13.42	13.11	12.82	12.55
31%	15.05	14.63	14.24	13.87	13.54	13.23	12.94	12.67
32%	15.18	14.75	14.36	13.99	13.66	13.34	13.05	12.77
33%	15.30	14.87	14.47	14.11	13.77	13.45	13.15	12.88
34%	15.41	14.98	14.58	14.21	13.87	13.55	13.25	12.97
35%	15.52	15.08	14.68	14.31	13.96	13.64	13.34	13.06
36%	15.62	15.18	14.77	14.40	14.05	13.73	13.43	13.15
37%	15.71	15.27	14.86	14.48	14.14	13.81	13.51	13.22
38%	15.79	15.35	14.94	14.56	14.21	13.88	13.58	13.29
39%	15.87	15.42	15.01	14.63	14.28	13.95	13.64	13.36
40%	15.94	15.49	15.08	14.70	14.34	14.01	13.70	13.42
41%	16.00	15.55	15.14	14.75	14.40	14.07	13.76	13.47
42%	16.06	15.61	15.19	14.81	14.45	14.12	13.81	13.52
43%	16.11	15.66	15.24	14.85	14.49	14.16	13.85	13.56
44%	16.15	15.70	15.28	14.89	14.53	14.20	13.89	13.59
45%	16.19	15.73	15.31	14.92	14.57	14.23	13.92	13.62
46%	16.22	15.76	15.34	14.95	14.59	14.26	13.94	13.65
47%	16.24	15.78	15.36	14.97	14.61	14.28	13.96	13.67
48%	16.26	15.80	15.38	14.99	14.63	14.29	13.98	13.68
49%	16.27	15.81	15.39	15.00	14.64	14.30	13.98	13.69
50%	16.27	15.81	15.39	15.00	14.64	14.30	13.99	13.69

ERROR RANGE TABLES (Continued)

PERCENT DIED	PATIENT NUMBER 150	175	200	225	250	275	300	325
1%	2.44	2.26	2.11	1.99	1.89	1.80	1.72	1.66
2%	3.43	3.17	2.97	2.80	2.66	2.53	2.42	2.33
3%	4.18	3.87	3.62	3.41	3.24	3.09	2.95	2.84
4%	4.80	4.44	4.16	3.92	3.72	3.55	3.39	3.26
5%	5.34	4.94	4.62	4.36	4.14	3.94	3.77	3.63
6%	5.82	5.39	5.04	4.75	4.51	4.30	4.11	3.95
7%	6.25	5.79	5.41	5.10	4.84	4.62	4.42	4.25
8%	6.65	6.15	5.75	5.43	5.15	4.91	4.70	4.51
9%	7.01	6.49	6.07	5.72	5.43	5.18	4.96	4.76
10%	7.35	6.80	6.36	6.00	5.69	5.43	5.20	4.99
11%	7.66	7.10	6.64	6.26	5.94	5.66	5.42	5.21
12%	7.96	7.37	6.89	6.50	6.17	5.88	5.63	5.41
13%	8.24	7.63	7.13	6.73	6.38	6.08	5.82	5.60
14%	8.50	7.87	7.36	6.94	6.58	6.28	6.01	5.77
15%	8.75	8.10	7.57	7.14	6.77	6.46	6.18	5.94
16%	8.98	8.31	7.78	7.33	6.96	6.63	6.35	6.10
17%	9.20	8.52	7.97	7.51	7.13	6.80	6.51	6.25
18%	9.41	8.71	8.15	7.68	7.29	6.95	6.65	6.39
19%	9.61	8.90	8.32	7.85	7.44	7.10	6.79	6.53
20%	9.80	9.07	8.49	8.00	7.59	7.24	6.93	6.66
21%	9.98	9.24	8.64	8.15	7.73	7.37	7.05	6.78
22%	10.15	9.39	8.79	8.28	7.86	7.49	7.17	6.89
23%	10.31	9.54	8.93	8.42	7.98	7.61	7.29	7.00
24%	10.46	9.69	9.06	8.54	8.10	7.73	7.40	7.11
25%	10.61	9.82	9.19	8.66	8.22	7.83	7.50	7.21
26%	10.74	9.95	9.30	8.77	8.32	7.94	7.60	7.30
27%	10.87	10.07	9.42	8.88	8.42	8.03	7.69	7.39
28%	11.00	10.18	9.52	8.89	8.52	8.12	7.78	7.47
29%	11.11	10.29	9.63	9.08	8.61	8.21	7.86	7.55
30%	11.22	10.39	9.72	9.17	8.69	8.29	7.94	7.63
31%	11.33	10.49	9.81	9.25	8.78	8.37	8.01	7.70
32%	11.43	10.58	9.90	9.33	8.85	8.44	8.08	7.76
33%	11.52	10.66	9.97	9.40	8.92	8.51	8.14	7.82
34%	11.60	10.74	10.05	9.47	8.99	8.57	8.20	7.88
35%	11.68	10.82	10.12	9.54	9.05	8.63	8.26	7.94
36%	11.76	10.89	10.18	9.60	9.11	8.68	8.31	7.99
37%	11.83	10.95	10.24	9.66	9.16	8.73	8.36	8.03
38%	11.89	11.01	10.30	9.71	9.21	8.78	8.41	8.08
39%	11.95	11.06	10.35	9.75	9.25	8.82	8.45	8.12
40%	12.00	11.11	10.39	9.80	9.30	8.86	8.49	8.15
41%	12.05	11.15	10.43	9.84	9.33	8.90	8.52	8.18
42%	12.09	11.19	10.47	9.87	9.36	8.93	8.55	8.21
43%	12.13	11.23	10.50	9.90	9.39	8.96	8.57	8.24
44%	12.16	11.26	10.53	9.93	9.42	8.98	8.60	8.26
45%	12.19	11.28	10.55	9.95	9.44	9.00	8.62	8.28
46%	12.21	11.30	10.57	9.97	9.46	9.02	8.63	8.29
47%	12.23	11.32	10.59	9.98	9.47	9.03	8.64	8.31
48%	12.24	11.33	10.60	9.99	9.48	9.04	8.65	8.31
49%	12.24	11.34	10.60	10.00	9.48	9.04	8.66	8.32
50%	12.25	11.34	10.61	10.00	9.49	9.05	8.66	8.32

ERROR RANGE TABLES (Continued)

PERCENT DIED	PATIENT NUMBER 350	375	400	425	500	600	700	800
1%	1.60	1.54	1.49	1.45	1.33	1.22	1.13	1.06
2%	2.24	2.17	2.10	2.04	1.88	1.71	1.59	1.48
3%	2.74	2.64	2.56	2.48	2.29	2.09	1.93	1.81
4%	3.14	3.04	2.94	2.85	2.63	2.40	2.22	2.08
5%	3.49	3.38	3.27	3.17	2.92	2.67	2.47	2.31
6%	3.81	3.68	3.56	3.46	3.19	2.91	2.69	2.52
7%	4.09	3.95	3.83	3.71	3.42	3.12	2.89	2.71
8%	4.35	4.20	4.07	3.95	3.64	3.32	3.08	2.88
9%	4.59	4.43	4.29	4.16	3.84	3.50	3.24	3.04
10%	4.81	4.65	4.50	4.37	4.02	3.67	3.40	3.18
11%	5.02	4.85	4.69	4.55	4.20	3.83	3.55	3.32
12%	5.21	5.03	4.87	4.73	4.36	3.98	3.68	3.45
13%	5.39	5.21	5.04	4.89	4.51	4.12	3.81	3.57
14%	5.56	5.38	5.20	5.05	4.66	4.25	3.93	3.68
15%	5.73	5.53	5.36	5.20	4.79	4.37	4.05	3.79
16%	5.88	5.68	5.50	5.33	4.92	4.49	4.16	3.89
17%	6.02	5.82	5.63	5.47	5.04	4.60	4.26	3.98
18%	6.16	5.95	5.76	5.59	5.15	4.71	4.36	4.07
19%	6.29	6.08	5.88	5.71	5.26	4.80	4.45	4.16
20%	6.41	6.20	6.00	5.82	5.37	4.90	4.54	4.24
21%	6.53	6.31	6.11	5.93	5.46	4.99	4.62	4.32
22%	6.64	6.42	6.21	6.03	5.56	5.07	4.70	4.39
23%	6.75	6.52	6.31	6.12	5.65	5.15	4.77	4.46
24%	6.85	6.62	6.41	6.21	5.73	5.23	4.84	4.53
25%	6.94	6.71	6.50	6.30	5.81	5.30	4.91	4.59
26%	7.03	6.80	6.58	6.38	5.88	5.37	4.97	4.65
27%	7.12	6.88	6.66	6.46	5.96	5.44	5.03	4.71
28%	7.20	6.96	6.73	6.53	6.02	5.50	5.09	4.76
29%	7.28	7.03	6.81	6.60	6.09	5.56	5.15	4.81
30%	7.35	7.10	6.87	6.67	6.15	5.61	5.20	4.86
31%	7.42	7.16	6.94	6.73	6.20	5.66	5.24	4.91
32%	7.48	7.23	7.00	6.79	6.26	5.71	5.29	4.95
33%	7.54	7.28	7.05	6.84	6.31	5.76	5.33	4.99
34%	7.60	7.34	7.11	6.89	6.36	5.80	5.37	5.02
35%	7.65	7.39	7.15	6.94	6.40	5.84	5.41	5.06
36%	7.70	7.44	7.20	6.99	6.44	5.88	5.44	5.09
37%	7.74	7.48	7.24	7.03	6.48	5.91	5.47	5.12
38%	7.78	7.52	7.28	7.06	6.51	5.94	5.50	5.15
39%	7.82	7.56	7.32	7.10	6.54	5.97	5.53	5.17
40%	7.86	7.59	7.35	7.13	6.57	6.00	5.55	5.20
41%	7.89	7.62	7.38	7.16	6.60	6.02	5.58	5.22
42%	7.91	7.65	7.40	7.18	6.62	6.04	5.60	5.23
43%	7.94	7.67	7.43	7.20	6.64	6.06	5.61	5.25
44%	7.96	7.69	7.45	7.22	6.66	6.08	5.63	5.26
45%	7.98	7.71	7.46	7.24	6.67	6.09	5.64	5.28
46%	7.99	7.72	7.48	7.25	6.69	6.10	5.65	5.29
47%	8.00	7.73	7.49	7.26	6.70	6.11	5.66	5.29
48%	8.01	7.74	7.49	7.27	6.70	6.12	5.66	5.30
49%	8.02	7.74	7.50	7.27	6.71	6.12	5.67	5.30
50%	8.02	7.75	7.50	7.28	6.71	6.12	5.67	5.30

ERROR RANGE TABLES (Continued)

PERCENT DIED	PATIENT NUMBER 900	1000	1100	1200	1300	1400	1500	1600
1%	0.99	0.94	0.90	0.86	0.83	0.80	0.77	0.75
2%	1.40	1.33	1.27	1.21	1.16	1.12	1.08	1.05
3%	1.71	1.62	1.54	1.48	1.42	1.37	1.32	1.28
4%	1.96	1.86	1.77	1.70	1.63	1.57	1.52	1.47
5%	2.18	2.07	1.97	1.89	1.81	1.75	1.69	1.63
6%	2.37	2.25	2.15	2.06	1.98	1.90	1.84	1.78
7%	2.55	2.42	2.31	2.21	2.12	2.05	1.98	1.91
8%	2.71	2.57	2.45	2.35	2.26	2.18	2.10	2.03
9%	2.86	2.71	2.59	2.48	2.38	2.29	2.22	2.15
10%	3.00	2.85	2.71	2.60	2.50	2.41	2.32	2.25
11%	3.13	2.97	2.83	2.71	2.60	2.51	2.42	2.35
12%	3.25	3.08	2.94	2.81	2.70	2.61	2.52	2.44
13%	3.36	3.19	3.04	2.91	2.80	2.70	2.60	2.52
14%	3.47	3.29	3.14	3.00	2.89	2.78	2.69	2.60
15%	3.57	3.39	3.23	3.09	2.97	2.86	2.77	2.68
16%	3.67	3.48	3.32	3.17	3.05	2.94	2.84	2.75
17%	3.76	3.56	3.40	3.25	3.13	3.01	2.91	2.82
18%	3.84	3.64	3.48	3.33	3.20	3.08	2.98	2.88
19%	3.92	3.72	3.55	3.40	3.26	3.15	3.04	2.94
20%	4.00	3.79	3.62	3.46	3.33	3.21	3.10	3.00
21%	4.07	3.86	3.68	3.53	3.39	3.27	3.15	3.05
22%	4.14	3.93	3.75	3.59	3.45	3.32	3.21	3.11
23%	4.21	3.99	3.81	3.64	3.50	3.37	3.26	3.16
24%	4.27	4.05	3.86	3.70	3.55	3.42	3.31	3.20
25%	4.33	4.11	3.92	3.75	3.60	3.47	3.35	3.25
26%	4.39	4.16	3.97	3.80	3.65	3.52	3.40	3.29
27%	4.44	4.21	4.02	3.84	3.69	3.56	3.44	3.33
28%	4.49	4.26	4.06	3.89	3.74	3.60	3.48	3.37
29%	4.54	4.30	4.10	3.93	3.78	3.64	3.51	3.40
30%	4.58	4.35	4.15	3.97	3.81	3.67	3.55	3.44
31%	4.62	4.39	4.18	4.01	3.85	3.71	3.58	3.47
32%	4.66	4.43	4.22	4.04	3.88	3.74	3.61	3.50
33%	4.70	4.46	4.25	4.07	3.91	3.77	3.64	3.53
34%	4.74	4.49	4.28	4.10	3.94	3.80	3.67	3.55
35%	4.77	4.52	4.31	4.13	3.97	3.82	3.69	3.58
36%	4.80	4.55	4.34	4.16	3.99	3.85	3.72	3.60
37%	4.83	4.58	4.37	4.18	4.02	3.87	3.74	3.62
38%	4.85	4.60	4.39	4.20	4.04	3.89	3.76	3.64
39%	4.88	4.63	4.41	4.22	4.06	3.91	3.78	3.66
40%	4.90	4.65	4.43	4.24	4.08	3.93	3.79	3.67
41%	4.92	4.67	4.45	4.26	4.09	3.94	3.81	3.69
42%	4.94	4.68	4.46	4.27	4.11	3.96	3.82	3.70
43%	4.95	4.70	4.48	4.29	4.12	3.97	3.83	3.71
44%	4.96	4.71	4.49	4.30	4.13	3.98	3.84	3.72
45%	4.97	4.72	4.50	4.31	4.14	3.99	3.85	3.73
46%	4.98	4.73	4.51	4.32	4.15	4.00	3.86	3.74
47%	4.99	4.73	4.51	4.32	4.15	4.00	3.87	3.74
48%	5.00	4.74	4.52	4.33	4.16	4.01	3.87	3.75
49%	5.00	4.74	4.52	4.33	4.16	4.01	3.87	3.75
50%	5.00	4.74	4.52	4.33	4.16	4.01	3.87	3.75